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CITY OF WAKEFIELD.

REPORT

ON THE

PUBLIC HEALTH

AND

SANITARY STATE

OF THE

CITY OF WAKEFIELD

For the Year 1928,

BY

THOMAS GIBSON, M.D., C.M., D.P.H.,

MEDICAL OFFICER OF HEALTH.



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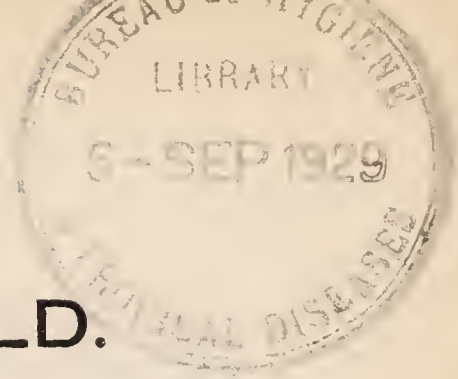
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PUBLIC HEALTH DEPARTMENT,

TOWN HALL,

WAKEFIELD,

11th June, 1929.

*To the Mayor, Aldermen and Councillors
of the City of Wakefield.*

MR. MAYOR AND GENTLEMEN,

I beg to submit for your information and consideration a Report on the Public Health and Sanitary State of Wakefield for the year 1928, which happens to be the 26th of the series of Annual Reports which I have had the privilege of compiling.

In the preparation of the Report, which follows the lines recommended by the Ministry of Health for interim reports, I have received valuable assistance from Dr. Allardice, Dr. Eeles, who has prepared the Maternity and Child Welfare Section, Mr. Roberts, Chief Sanitary Inspector, who has prepared the Sanitary Administration Section, the other Members of the Staff of the Department, and also from several colleagues in other Departments.

I am,

Yours faithfully,

THOMAS GIBSON,

Medical Officer of Health.

1.—GENERAL STATISTICS.

Area	.. .. .	4,971 acres.
Population (Census 1921)	.. .. .	52,891.
Population (Estimated by Registrar-General at Middle of 1928)	.. .. .	56,620.
Number of Inhabited Houses (Census 1921)	.. .. .	11,252.
Rateable Value	.. .. .	£367,922.
Sum represented by a Penny Rate	.. .. .	£1,425.

The institutional population at the middle of the year was 3,336, of which 2,803 were non-residents, and 533 were residents. The nett population, excluding non-residents, is 53,817, and this has been used as the basis for calculating the various rates given in this Report.

It is necessary to point out that the estimated population for 1928 exceeds that of 1927 by 1,784, which is much above the natural increase. This somewhat abnormal rise in the estimated population is based on a corresponding abnormal increase in the numbers on the register of local government voters, and suggests a considerable immigration movement. When comparing the various death and other rates given in the Report with those for recent years, it should be kept in mind that the effect of raising the population has been to make these latter rates appear somewhat higher than they really were.

2.—EXTRACTS FROM THE VITAL STATISTICS OF 1928.

(1) Marriages.

416 marriages were celebrated, equal to a marriage rate of 15·5 persons married per 1,000 of the population, as compared with 18·6 in 1927, 15·5 in 1926, and 19·24 the average for the preceding 10 years. There were 70 fewer marriages in 1928 than in 1927.

(2) Births.

Excluding 100 non-resident births, and including 19 resident births which occurred outside the City, the total number of births registered in the City was 996 (519 males and 477 females) giving a birth rate of 18·5 per 1,000, as compared with 18·4 in 1927, 19·7 in 1926, and 20·6 the average for the preceding 10 years. The number of births in 1928 was 38 more than in 1927. The birth rate in England and Wales in 1928 was 16·7, and in the large towns, 16·9. 50 births (5 per cent.) were illegitimate, which is the same percentage as in 1927.

Under the Notification of Births Act, 1,092 births were notified, 724 from homes, and 368 from institutions. Of the 724 home confinements, 431 were attended by doctors, and 293 by midwives. The institutional births include 297 at the Municipal Maternity Hospital, 40 in the White Rose Hospital, 29 in Private Maternity Homes, and 2 in the West Riding Mental Hospital. 307 of the institutional confinements were attended by midwives, and 61 by doctors. 34 of the registered births, or 3 per cent., were not notified, as compared with 5 per cent. in 1927, and 6 per cent. in 1926. In each case where the birth was not notified, a doctor had been in attendance, and on interrogating the father, who in law is primarily responsible for notification, we were generally informed either that he did not know of the legal requirement, or that he was under the belief that the doctor would notify.

40 (3·7 per cent.) of the Notified Births were stillbirths. The bulk of the district cases attended by midwives were attended by 4 midwives, who attended 82, 79, 75 and 47 confinements, respectively.

(3) Deaths.

CAUSES OF, AND AGES AT, DEATH DURING THE YEAR 1928.

Causes of Death. 1	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the district.									
	Total All ages. 2	Under 1 year. 3	1 and under 2 years. 4	2 and under 5 years. 5	5 and under 15 years. 6	15 and under 25 years. 7	25 and under 45 years. 8	45 and under 65 years. 9	65 and under 75 years. 10	75 years and over. 11
All Cases { Certified { Uncertified	620 —	59 —	10 —	12 —	14 —	22 —	63 —	172 —	154 —	114 —
Enteric Fever	1			1						
Smallpox										
Measles	2		1		1					
Scarlet Fever	1				1					
Whooping Cough	2	2								
Diphtheria and Croup	2		1	1						
Influenza	5					1	1	2	1	
Encephalitis Lethargica	2					1		1		
Meningococcal Meningitis	2	1		1						
Tuberculosis of Respiratory System	37				2	5	21	9		
Other Tuberculous Diseases	12	1		4		1	5	1		
Cancer, Malignant Disease	86					2	6	40	28	10
Rheumatic Fever	2				2					
Diabetes	12						1	5	5	1
Cerebral Haemorrhage	57							16	26	15
Heart Disease	101				2	2	8	31	33	25
Arterio Sclerosis	10							3	3	4
Bronchitis	49	6		1			2	2	19	19
Pneumonia (all forms)	38	6	4	2	2	1	1	13	4	5

Causes of Death. 1	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the district.									
	Total All ages. 2	Under 1 year. 3	1 and under 2 years. 4	2 and under 5 years. 5	5 and under 15 years. 6	15 and under 25 years. 7	25 and under 45 years. 8	45 and under 65 years. 9	65 and under 75 years. 10	75 years and over. 11
Other Respiratory Diseases ..	4		2					2		
Ulcer of Stomach or Duodenum ..	2						1	1		
Diarrhoea, etc. (under 2 years) ..	9	8	1							
Appendicitis and Typhlitis ..	5					1	1	2		1
Cirrhosis of Liver ..										
Acute or Chronic Nephritis ..	28					1	3	10	11	3
Puerperal Sepsis ..										
Other accidents and diseases of pregnancy and parturition ..	5	1				1	3			
Congenital debility and malform- ation, premature birth ..	18	18								
Suicide ..	7						1	6		
Other deaths from Violence ..	30			2	1	4	6	10	5	2
Other defined diseases ..	88	14	1		3	2	3	18	19	28
Causes ill-defined or unknown ..	3	2								1
Totals ..	620	59	10	12	14	22	63	172	154	114
Sub-Entries included in above figures :—										
Broncho Pneumonia ..	20	6	3	3	1			2	2	3
Old Age ..	21								8	14
Syphilis ..										

The total number of deaths registered in Wakefield during 1928 was 987, including 394 non-residents. In addition, 27 resident deaths occurred outside the City. The number of resident deaths was therefore 620 (338 males and 282 females) giving a death rate of 11·5 per 1,000, as compared with 13·3 in 1927, 12·9 in 1926 and 14·6 the average for the preceding 10 years. In 1928 there were 70 fewer deaths than in 1927. The 1928 death rate in England and Wales was 11·7, and in the Great Towns, 11·6.

171 (28 per cent.) of the resident deaths occurred in public institutions, and 6 in private nursing homes. All the deaths were certified by a Doctor or the Coroner.

The number and percentage of the deaths at the various age periods were :—

Age period.			No. of Deaths 1928.	Percentage 1928.	Percentage 1927.
Under 1 year	..	..	59	9.5	11.4
1—2 years	..	..	10	1.6	2.6
2—5 „	..	..	12	1.9	3.7
5—15 „	..	..	14	2.3	4.0
15—25 „	..	..	22	3.5	3.7
25—45 „	..	..	63	10.2	11.5
45—65 „	..	..	172	27.7	27.5
65—75 „	..	..	154	24.9	18.2
Over 75 years	..	..	114	18.4	17.4

The following table gives the chief causes of death :—

Cause of Death.	No. of Deaths.	Males.	Females.	Percentage of total deaths in 1928.	Percentage of total deaths in 1927.
Heart Disease	101	45	56	16.3	12.4
Respiratory Diseases (excluding Phthisis)	91	55	36	14.7	21.3
Cancer	86	38	48	13.8	9.5
Cerebral Haemorrhage	57	32	25	9.2	8.4
Tuberculosis	49	31	18	7.9	7.0
Violence (excluding suicide)	30	22	8	4.8	4.8
Nephritis	28	9	19	4.5	2.9
Old Age.. ..	21	10	11	3.4	4.0
Congenital Debility, Malformation and Premature Birth ..	18	10	8	2.9	2.2

There were 101 deaths from Heart Disease (45 males and 56 females), giving a death rate of 1.88 as compared with 1.65 in 1927, and 1.59 the average for the preceding 10 years. The number of deaths was 15 more than in 1927. 88 per cent. of the deaths were persons over 45 years of age.

There were 91 deaths from Respiratory Diseases (excluding Phthisis) (55 males and 36 females) comprising 49 from Bronchitis, 38 from Pneumonia, and 4 from other Respiratory Diseases, and giving a death rate of 1.7 as compared with 2.82 in 1928, and 2.88 the average for the preceding 10 years.

The deaths were 56 fewer than in 1927.

The following table gives the number of deaths from these diseases in months and quarters :—

		Total.	Bronchitis.	Pneumonia	Other Respiratory Diseases.
January ..	11	38	6	5	—
February ..	11		6	4	1
March ..	16		9	6	1
April ..	8	17	4	4	—
May ..	5		2	3	—
June ..	4		2	2	—
July ..	2	11	1	1	—
August ..	6		5	1	—
September ..	3		2	1	—
October ..	6	25	3	3	—
November ..	9		4	4	1
December ..	10		5	4	1
		91	49	38	4

There were 86 deaths from Cancer (38 males and 48 females) giving a death rate of 1·59 as compared with 1·25 in 1927, and 1·24 the average for the preceding 10 years. The number of deaths was 20 more than in 1927.

There were 57 deaths from Cerebral Haemorrhage (32 males and 25 females) giving a death rate of 1·06 as compared with 1·1 in 1927.

There were 49 deaths from Tuberculosis (31 males and 18 females) giving a death rate of 0·91 as compared with 0·94 in 1927, and 1·30 the average for the preceding 10 years. The number of deaths was the same as in 1927.

There were 37 deaths from Pulmonary Tuberculosis (24 males and 13 females) giving a death rate of 0·69 as compared with 0·65 in 1927, and 1·00 the average for the preceding 10 years. The number of deaths was 3 more than in 1927.

There were 12 deaths (7 males and 5 females) from non-pulmonary tuberculosis, giving a death rate of 0·22 as compared

with 0·29 in 1927, and 0·29 the average for the preceding 10 years. The number of deaths was 3 less than in 1927. The 12 deaths comprised 9 from meningeal disease, 2 from abdominal disease, and 1 from kidney disease. 8 of the fatal cases had never been notified, 7 of which were meningeal and 1 abdominal. The number of deaths from the seven principal Zymotic Diseases was 17 (Enteric Fever 1, Measles 2, Scarlet Fever 1, Whooping Cough 2, Diphtheria 2, and Diarrhoea 9), giving a death rate of 0·31 as compared with 0·75 in 1927, and 0·71 the average for the preceding 10 years.

The number of children under 2 years dying from diarrhoea and enteritis was 9, giving a death rate of 9·03 per 1,000 births, compared with 17·7 in 1927, and 12·1 the average for the preceding 10 years. The corresponding rate for 1928 in England and Wales was 7·0, and in the Great Towns, 9·6.

The number of infantile deaths (*i.e.*, under one year of age) was 59 (38 males and 21 females) giving an infantile mortality of 59 per 1,000 births, as compared with 82 in 1927, and 90 the average for the preceding 10 years. The corresponding rate for 1928 in England and Wales was 65, and in the Great Towns, 70. The legitimate infantile mortality was 58, and the illegitimate rate 80. The neo-natal mortality (*i.e.*, the mortality during the first month of life) was 29 per 1,000 births as compared with 27 in 1927, and 34 the average for the preceding 10 years. The infantile mortality rates in the various Wards are as follows :—

Eastmoor	113	Primrose Hill ..	62
Calder	107	Sandal	47
South Westgate ..	93	North Westgate..	38
St. John's	87	Northgate	30
Kirkgate	73	Alverthorpe	26
Belle Vue	66		

The principal causes of infantile deaths were Premature Birth (20 per cent.), Diarrhoea and Enteritis (13 per cent.), Bronchitis (10 per cent.), Pneumonia (10 per cent.), and Atrophy, Debility, and Marasmus (8 per cent.).

There were 3 deaths from Pemphigus Neonatorum, 1 each from Malaena, Extra-dural abscess following Mastoiditis, Retro-pharyngeal abscess, Purpura Haemorrhagica, Intussusception, and Cellulitis followed by Pyaemia.

34 per cent. of the infantile mortality occurred within the first week of life, 50 per cent. within the first month, and 76 per cent. within the first six months of life.

There were 4 maternal deaths from diseases or accidents of pregnancy and parturition, giving a mortality of 4 per 1,000 births, as compared with 3·13 in 1927, and 5·08 the average for the preceding 10 years.

There were no deaths from Puerperal Sepsis.

The 30 deaths from Violence included 7 from motor vehicle accidents, and 3 from colliery accidents.

There was one death from scalding, a child of 3 years, and one—an infant death—from overlaying.

There were 9 deaths from drowning, but in each case there was no evidence to show whether the death was accidental or suicidal. Of the 7 suicidal deaths, there were 2 each from hanging, drowning, and cut throat, and 1 from poisoning by carbolic acid. All the suicidal deaths were of persons over 45 years of age, except one of 33 years.

99 Inquests were held during the year on 65 residents, and 34 non-residents.

Remarks on the Death Rate.

In 1928, Wakefield achieved its lowest general death rate, and its lowest infantile death rate, and both were substantially below the average. The general death rate is not only low, but for the first time, so far as my knowledge goes, Wakefield has had a lower death rate than that of England and Wales. The death rate is 3 per 1,000 less than the average for the preceding 10 years, and this represents an annual saving of 160 lives. The feeling of gratification with which one records this achievement is somewhat chastened by the knowledge that the Report for 1929 will probably not present such favourable figures, because of the ravages of influenza which we have recently experienced. But even so, the low death rate of 1928 does bespeak a very great improvement in the state of the public health which, apart from those epidemics over which we have little or no control, may reasonably be expected to continue.

The advantages which we may expect to get from improved housing conditions—and admittedly there is great room for improvement in this respect—are suggested by the fact that the general death rate in the Portobello Housing Estate during 1928 was less than 6 per 1,000 of the population, or not much more than half of the death rate of Wakefield as a whole.

Possibly the constitution of the housing estate population is more favourable to a low mortality than that of the general population but, so far as I can judge, not to any great extent, and I am inclined to attribute the greater part of the lessened mortality to the salubrity of the housing conditions at Portobello.

The infantile mortality (59 per 1,000 births) is not only the lowest rate for the City, but is very much lower than any rate previously achieved. The next lowest rate was 70 in 1925. In order to demonstrate the extraordinary declension in this form of mortality, I subjoin the average rates during the past 57 years.

1870—1879	..	..	..	171
1880—1889	..	..	..	154
1890—1899	..	..	..	175
1900—1909	..	..	..	143
1910—1919	..	..	..	109
1920—1927	..	..	..	86
1928 ..	..	..	..	59

In other words, the mortality is now only a third of what it was thirty years ago. It is also significant that the mortality showed no signs of abatement until maternity and child welfare work was started, and the abatement has been increasingly marked as the welfare work has become extended and improved. The year's figures also show that the infantile mortality is becoming more and more concentrated into the earlier weeks of the first year, and is more and more composed of premature, frail, and deformed infants, who have little chance of surviving the first few weeks of life. Half of the deaths occur during the first month of life, and one-third die during the first week.

For some years past the proportion of infant deaths in Wakefield from diarrhoea and enteritis has appeared unduly high, particularly when compared with the corresponding death rate in other industrial towns, and Dr. Eeles, at my suggestion, has made a special enquiry into the subject, and prepared a Report which appears at the end of this section. This very careful enquiry has shown that probably the actual death rate from diarrhoea and enteritis is no higher in Wakefield than in other towns, and that the apparent excess may be due in large measure to differences of certification.

Looking at the individual causes of mortality we find that the mortality from Heart Disease and Cancer have both increased.

It may be that the general improvement in the public health which has extended the lives of the members of the community has helped to augment the mortality from Cancer, and possibly also that from Heart Disease. Cancer is particularly a disease of the old, and if you increase the proportion of old people in the community you increase the number of people liable to develop Cancer. Whether this fact, as well as increased accuracy in diagnosis, sufficiently account for the increased numbers recorded remains a moot point. Unfortunately, except possibly with those forms of the disease associated with certain occupations, we do not know how to prevent Cancer. At the same time, we do know that many forms of Cancer, particularly Cancers on the surface of the body are often capable of being removed without recurrence, provided the disease is recognised and treated in the early stages. Education of the public on this subject is therefore a means of preventing, not the occurrence of Cancer, but, to some extent, the mortality from Cancer. We have tried to do something in this way in Wakefield, but up to the present our efforts have not shown much result. I am told by local surgeons that patients are not coming for treatment any earlier than they used to do, and a large proportion of them come too late for successful treatment.

With regard to Heart Disease, there is much scope for prevention. Although the brunt of the mortality falls on those past the meridian of life, in a large proportion the beginnings of the mischief are to be found in the earlier years of life. This is particularly true of rheumatic heart disease, which should either be prevented altogether or its severity mitigated by early and adequate treatment.

For many years I have deplored the excessive mortality from respiratory diseases, and it is consoling to note an improvement in 1928. As usual nearly three-fourths of this mortality occurred during the winter months. In 1927 I recorded a substantial fall in the tuberculosis mortality. In 1928 there has been a slight further decline, although the mortality of the pulmonary form was a trifle higher than in the preceding year. The decline is therefore due to a decline in the non-pulmonary form, the mortality of which has been stationary for a number of years.

The maternal mortality was slightly higher than in 1927, there being one more death, but it remains below the average. At the same time we cannot afford to lose one mother in every 250 confinements. If every expectant mother sought and received adequate antenatal attention, and, of course, proper

attention at the confinement, the mortality could be reduced, in my opinion, to a figure below one in a thousand confinements. This has actually been achieved at least in one district where a very complete system of antenatal care is in operation, and also at our own Maternity Hospital. At the East End Mothers Lying-in Home, London, and the district connected with it, there have been 63 maternal deaths, out of 45,442 confinements during the past 40 years, equal to a mortality of 1·3 per 1,000 confinements. A system of antenatal care was introduced in 1889. Before that date, the maternal mortality was 4 per 1,000, and after that date 1·08 per 1,000. During the last five years, with improvements in the antenatal care work, the mortality has fallen to 0·46 per 1,000 confinements. In obtaining these excellent results, no selection of cases has been made, difficult as well as simple cases, being taken as they arose. At the Wakefield Maternity Hospital during the 5 years 1924-1928, out of 1,211 confinements where the mother had previously been supervised through the Antenatal Clinic, there has only been one maternal death, and that from valvular heart disease, equal to a maternal mortality of 0·8 per 1,000 confinements.

An Inquiry into the mortality from Diarrhoea and Enteritis among Children under Two Years of Age.

By Dr. Jessie Eeles.

Wakefield's infant mortality rate, though not low in the past, compares quite favourably with that of other towns of similar size and similar industrial activity. For instance, in the four years from 1924 to 1927, the Infant Mortality rates in Wakefield were 89, 71, 80 and 81. For Huddersfield, the corresponding figures were 97, 67, 59 and 74; for Dewsbury, 96, 105, 89 and 63; and for Halifax, 97, 93, 80 and 90. But in Wakefield the death rate from Diarrhoea and Enteritis has always been proportionately very high. For the same four years, the death rates from Diarrhoea and Enteritis under two years per 1,000 births were 15·9, 13·4, 14·4 and 12·4 in Wakefield; in Huddersfield, the rates were 2·6, 1·2, 1·6 and 2·5; in Dewsbury, 6·9, 11·2, 7·5 and 5·6; and in Halifax, 7·1, 3·4, 4·0 and 5·3.

On detailed investigation of the fatal cases which occurred in Wakefield during the past four years, and about which information was available, the following facts emerge.

(1) This "Enteritis" is not the ordinary infective Summer Diarrhoea. A small epidemic of this infective variety occurred in 1925, and there were 8 deaths during the summer months.

But even so, during the four years under consideration, out of 66 deaths, only 22 occurred during the second and third quarters of the year, and 44 during the first and fourth. The mortality is therefore greater during cold and wet weather, being greatest when deaths from Bronchitis and broncho-pneumonia are at their maximum. It is not so definitely seasonal as Broncho-pneumonia, however, the proportion of winter to summer mortality in Enteritis being 2 to 1, and in the case of Broncho-pneumonia for the same four years, 3 to 1. There are other factors at work.

(2) Housing conditions make very little difference. The infants belonged to every variety of home, and only four of the houses were reported as being dirty by the Health Visitor. Overcrowding was present in 6 cases.

(3) The method of feeding has a definite influence as shown by these cases.

Out of 57 where the method of feeding was ascertained, only 22 were breast fed, and if we take those under nine months where the method of feeding was known, 18 out of 48 were breast fed. We know that fully 80 per cent. of Wakefield babies are breast fed, *i.e.*, for every 30 artificially fed infants there are 120 which are breast fed. But for every 30 artificially fed babies dying of enteritis there are only 18 breast fed infants. This shows that breast feeding is a great protection though not an absolute safeguard.

When we study the feeding of the 30 hand fed babies, only 9 were found to have been fed on Cow's Milk, and 16 on Dried Milk of various sorts. Sterility of food therefore cannot be the whole explanation of the comparative immunity provided by breast feeding. Dried Milk is much safer in this respect than Cow's Milk—almost as safe as breast milk, and yet the mortality from enteritis among the small percentage of infants so fed is very high. The explanation is probably a matter of the greater digestibility of breast milk, modified by the varying power of digestion of the individual infants concerned. Of this more will be said later.

(4) The age incidence is helpful. The first month of life accounts for 16 out of the 66 deaths, and the second month for 12, *i.e.*, full 48 per cent. of the deaths from enteritis occur within two months of birth. This is the time when the infants which are incapable of adapting themselves to post-natal conditions are weeded out. Many of these infants were found on enquiry to be premature, or "delicate from birth," and the

enteritis in these cases was no doubt merely due to inability to assimilate any sort of food. 12 of the 18 breast fed babies were under two months. The third and fourth months have a very small number of cases against them—4 and 2 respectively. There is a rise in the fifth month, and still further in the sixth and thereafter the mortality falls till from the ninth month onwards, there are only occasional cases. 21 cases occurred between the fifth and ninth months, and only 11 out of the total 66 between the ages of nine months and two years.

This second rise in the mortality curve corresponds too closely to the commencement of teething to be passed over lightly. Undoubtedly, a teething infant is more liable to catarrhal complaints than a normal one, and its nervous system is hypersensitive, leading among other things to over-stimulation of the bowel and “diarrhoea.” Teething does seem to be a factor in the infant mortality from Diarrhoea, especially in artificially fed infants. Breast fed babies seem to escape more easily.

In an article in the “British Medical Journal” of February 23rd, 1929, Dr. Eric Pritchard shows how breast milk can be digested in the presence of less than half the percentage of Hydrochloric Acid required for the digestion of Cow’s Milk. He also says :—

“One of the most important things I have learned
 “from certain investigations which we have made at the
 “Infant’s Hospital is that the pH of gastric juice in infants
 “shows an immediate fall with the onset of pyrexial and
 “other constitutional symptoms. With a falling off in
 “efficiency of gastric digestion, followed in all probability
 “by similar falls in the efficiency of pancreatic and intestinal
 “digestion, there results a considerable danger of undigested
 “food entering the large intestine which gives opportunity
 “there for bacterial decompositions.”

This probably explains the greater liability to Diarrhoea shown by artificially fed infants as contrasted with breast fed ones.

(6) Apart from cases with prematurity or congenital debility as predisposing causes, there are a few where on enquiry, the illness was found to have commenced with Whooping Cough or Bronchitis and the Diarrhoea seemed to be a terminal condition—an indication of general weakness rather than the actual cause of death.

'Enteritis,' therefore, is a label used for cases of Diarrhoea resulting from a variety of causes.

- (1) Infective enteritis, or Summer Diarrhoea, for example in the summer of 1925. These cases are very few.
- (2) Complete inability to assimilate food, *e.g.*, from prematurity.
- (3) Diarrhoea which is digestive in origin, chiefly affecting artificially fed infants, especially during the teething months.
- (4) Terminal cases.

Only those in Group (1) and some in Group (3) should really be included among deaths from Enteritis.

GENERAL PROVISION OF HEALTH SERVICES.

A. (1) Fever Hospital in Park Lodge Lane.

This Hospital, used for the isolation of cases of Scarlet Fever, Diphtheria, and Enteric Fever, contains 34 beds. The old part of the Hospital comprises an administrative block and 2 Ward Blocks, each with 2 Wards, all brick buildings. During 1927 a temporary wooden block with 6 cubicle Wards was built, as well as a wooden bungalow with 3 bedrooms and sitting room for the use of the nursing staff. The area of the site was also enlarged from $\frac{1}{2}$ an acre to $1\frac{1}{2}$ acres, by taking in additional land from the adjoining field belonging to the Corporation. These additions have considerably improved the Hospital, but there still remain many drawbacks, described in previous Reports. During the year plans for the building of a combined Fever Hospital and Tuberculosis Sanatorium at Snapethorpe were prepared and were informally submitted to the Ministry of Health. However, in view of the introduction of the Local Government Bill and the probability of the transfer of the Poor Law administration to the Corporation, involving a general review of the Hospital provision of the City as a whole, it was thought desirable to postpone a decision on the Snapethorpe scheme to a later date.

(2) Smallpox Hospital, near Carr Gate.

This Hospital belongs to the Wakefield and District Smallpox Hospital Committee and contains 24 beds. It is used at present by the West Riding County Council as a Sanatorium. In the event of an outbreak of Smallpox, arrangements have been made for the first cases to be isolated at other Smallpox Hospitals in the neighbourhood.

B. (1) Tuberculosis.

Mount Vernon Sanatorium, Barnsley, belongs jointly to the Corporations of Barnsley and Wakefield, and provides 26 beds for each Authority for pulmonary tuberculosis only. There is no municipal provision for advanced cases.

(2) Maternity.

The Municipal Maternity Hospital in Blenheim Road accommodates 12 patients with 4 additional beds in an Isolation Ward. The Hospital is frequently overcrowded and the question of enlarging the Hospital is at present under consideration.

(3) Children.

There is no special children's Hospital in Wakefield, but the Corporation has an agreement with the Clayton Hospital for the admission of certain cases (*e.g.*, ophthalmia neonatorum).

(4) Orthopaedic.

There is an Orthopaedic Department at the local General Hospital. Cases are also sent by the Local Authority to Orthopaedic Hospitals outside the City.

(5) Other.

These are two General Hospitals in the City, the Clayton Hospital, which is a voluntary institution, and the White Rose Hospital which is a Poor Law institution, and attached to the Workhouse. The Clayton Hospital provides 108 beds which are mainly occupied by surgical cases. The White Rose Hospital provides 160 beds which are mainly occupied by medical cases, and a large proportion of these are chronic in character. Both Hospitals take in patients not only from the City, but from an extensive area around.

Institutional Provision for Unmarried Mothers, Illegitimate Infants and Homeless Children.

There is no provision for the above other than that provided by the Board of Guardians at the Workhouse, Infirmary and Scattered Homes.

Ambulance Facilities.

(1) For infectious cases, two motor ambulances are provided by the Corporation at the Fever Hospital. By arrangement with the Corporation, the Smallpox Motor Ambulance, belonging to the Wakefield and District Smallpox Hospital Committee is now garaged at the Fever Hospital, and is worked by the Corporation driver.

(2) For non-infectious and accident cases 2 motor ambulances are provided at the Police Station.

Clinics and Treatment Centres.

(a) Maternity and Child Welfare Centres.

There are six Child Welfare Centres provided by the Local Authority, but in the working of which assistance is rendered by the Wakefield Babies' Welcome Committee.

The following are the particulars of these Centres :—

Situation.	When open.	Doctor Attending.	Health Visitor in charge.
Wesleyan Sunday School Rooms, Batley Road, Alverthorpe.	Every Thursday, 2-30—4-30 p.m.	Dr. Eeles ..	Miss Dearden.
The Homestead, Alverthorpe Road.	Every Wednesday, 2-30—4-30 p.m.	Dr. Allardice.	Mrs. Paver.
Primitive Methodist Chapel Sunday School Rooms, Market Street.	Every Monday, 2-30—4-30 p.m.	Dr. Allardice.	Miss Knox.
Wesleyan Sunday School Rooms, Stanley Road.	Every Monday, 2-30—4-30 p.m.	Dr. Eeles ..	Miss Staniforth.
Mission Room, Mark Street, Thornes Lane.	Every Wednesday, 2-30—4-30 p.m.	Dr. Eeles ..	Miss Robertshaw.
Primitive Methodist Sunday School Rooms, Doncaster Road.	Every Tuesday, 2-30—4-30 p.m.	Dr. Eeles ..	Miss Thorp.

(b) Antenatal Clinic.

This is conducted by Dr. Eeles at the Maternity Hospital every Friday afternoon.

(c) Post-Natal Clinic.

This is conducted by Dr. Eeles at the Maternity Hospital every Thursday afternoon.

(d) School Clinics.

An Inspection and Treatment Clinic for Minor Ailments is provided at the Town Hall Chambers, King Street, and is open daily. The Ophthalmic and Dental Clinics are held in the same building.

(e) Tuberculosis Dispensary.

Is situated in Almshouse Lane, and is used jointly with the West Riding County Council. It is open two afternoons and one evening a week, and is in the charge of Dr. Gibson.

(f) Venereal Diseases Clinic.

The Clinic for Venereal Diseases at the Clayton Hospital is in the charge of Dr. Frew, who holds every week 2 sessions for men (Wednesday 6—8 p.m., and Friday 10—12 a.m.), and two sessions for women and children (Mondays 4—6 p.m., and Fridays 3—5 p.m.). Provision is made at the Clinic for daily irrigation and other treatment when required.

PUBLIC HEALTH OFFICERS.

The following are the Officers of the Public Health Department :—

Name.	Qualifications.	Office held.
Thomas Gibson ..	M.D. (Edin.), D.P.H. ..	Medical Officer of Health. School Medical Officer. Tuberculosis Officer. Medical Officer for Maternity Hospital and Child Welfare Centres. Medical Superintendent of Fever Hospital. Medical Officer under Mental Deficiency Act. Police Surgeon.

Name.	Qualifications.	Office held.
Frank Allardice ..	M.B., Ch.B., D.P.H. (Edin.)	Deputy Medical Officer of Health. Assistant School Medical Officer and School Ophthalmologist. Assistant Medical Officer for Maternity and Child Welfare.
Jessie Eeles ..	M.D., Ch.B. (Edin.) ..	Assistant Medical Officer of Health. Assistant Medical Officer for Maternity and Child Welfare. Assistant School Medical Officer.
William Roberts ..	Certificate of Royal Sanitary Institute for (1) Inspector of Nuisances and (2) Inspector of Meat and other Foods.	Senior Sanitary Inspector. Inspector of Meat and other Foods. Inspector under Housing Regulations. Inspector of Canal Boats.
Robert Greenwood	Certificate of Royal Sanitary Institute for (1) Inspector of Nuisances and (2) Inspector of Meat and other Foods.	District Sanitary Inspector. Inspector of Meat and other Foods. Inspector under the Housing Regulations.
James T. Briggs ..	Ditto	Ditto.
George E. Curtis ..	Ditto	Ditto.
Laurence E. King ..	Ditto	Ditto.
Harold Parkinson ..	Certificate of Royal Sanitary Institute for Inspector of Nuisances.	Assistant Sanitary Inspector and Clerk.
Sarah S. Thorp ..	Certificate of Royal Sanitary Institute for (1) Inspector of Nuisances, and (2) Maternity and Child Welfare, and (3) Health Visitor and School Nurse. C.M.B. Certificate. New Certificate of Royal Sanitary Institute for Health Visitors.	Senior Health Visitor. Superintendent, Belle Vue Child Welfare Centre. School Nurse. Tuberculosis Nurse.
Ada Knox	Trained Nurse C.M.B. Certificate.	Health Visitor. Superintendent, Market St. Child Welfare Centre. School Nurse. Tuberculosis Nurse.
Ellen R. Paver ..	Trained Nurse C.M.B. Certificate. New Certificate of Royal Sanitary Institute for Health Visitors.	Health Visitor. Superintendent, Homestead Child Welfare Centre. School Nurse. Tuberculosis Nurse.

Name.	Qualifications.	Office held.
Hilda Staniforth ..	Trained Nurse C.M.B. Certificate. Certificate of Royal Sanitary Institute for (1) Inspector of Nuisances (2) Health Health Visitor, and (3) School Nurse. New Certificate of Royal Sanitary Institute for Health Visitors.	Health Visitor. Superintendent, Eastmoor Child Welfare Centre. School Nurse. Tuberculosis Nurse.
Hilda Robertshaw ..	Trained Nurse C.M.B. Certificate. New Certificate of Royal Sanitary Institute for Health Visitors.	Health Visitor. Superintendent, Thornes Lane Child Welfare Centre. School Nurse and Tubercu- losis Nurse.
Maggie Dearden ..	Trained Nurse. C.M.B. Certificate. New Certificate of Royal Sanitary Institute for Health Visitors.	Health Visitor. Superintendent of Alver- thorpe Child Welfare Centre. School Nurse. Tuberculosis Nurse.
A. J. Peck	Nurse	Matron of City Fever Hospital.
Maud Bembridge ..	Trained Nurse C.M.B. Certificate.	Matron of Maternity Hospital.
Herbert Pollard ..	M.R.C.V.S.	Veterinary Surgeon. Veterinary Inspector of Dairy Cows (part-time Officer).
F. W. Richardson ..	F.I.C.	Analyst of Food, Drugs and Fertilisers.

The office staff consists of Beatrice Lake (Chief Clerk), Herbert W. Tate (School Medical Service), Ronald Shaw and George O. Allen.

Miss Robertshaw, Health Visitor, took up her duties in March, 1928, filling the vacancy caused by the resignation of Miss M. Cameron. Miss Dearden was appointed an additional Health Visitor and took up her duties in June, 1928.

Mr. L. E. King was appointed an additional Sanitary Inspector and took up his duties in December, 1928.

Professional Nursing in the Home.

(a) *General.* This is chiefly provided by the Local Nursing Association which employs three nurses. The Corporation has

an arrangement with the Association for the home nursing of cases of puerperal pyrexia, when required. One large engineering firm employs a nurse to attend the employees and their families.

(b) *Infectious Diseases.* The Health Visitors render assistance in the home nursing of cases of measles, whooping cough, ophthalmia neonatorum, pneumonia, etc.

Midwives.

During 1928, 14 midwives gave notice of intention to practice, including 5 at the Maternity Hospital, 2 at the Poor Law Infirmary, and 2 at a Private Maternity Home. Of the 5 Midwives doing district work, one is employed by the Corporation, and one by a private firm to attend the wives of their employees.

Maternity and Nursing Homes.

Two small nursing homes registered under the Midwives and Maternity Homes Act, 1926, continued during 1928. In 1928, 2 applications were received for registration under the Nursing Homes Registration Act, 1927, one for a Maternity Home and one for a Nursing Home. The application for the Maternity Home was refused on account of the unsuitability of the premises and no appeal was lodged. The application for the Nursing Home was granted.

Investigations into Maternal Mortality, etc.

Investigations into the circumstances of all maternal deaths and cases of puerperal fever are carried out by the Assistant Medical Officer for Maternity and Child Welfare.

Legislation in Force.

In addition to the general public health legislation the following local Acts provide powers relating to sanitary matters :—

1. Wakefield Corporation Act, 1877.

Sections 36, 44, 46, 53, 54, 55 in part, 57, 62, 64 and 65, relating to streets and buildings and prohibiting back-to-back houses, are operative within the City.

2. Wakefield Corporation Waterworks Act, 1880, empowered the Corporation to construct works to impound and use the waters of Rishworth Moors, on the Eastern side of the Pennine Chain. The powers of the Act have been extended and varied by several subsequent Acts.

3. Wakefield Corporation Act, 1887.

This Act gives powers with respect to the notification of certain infectious diseases and for preventing the spread of disease, but these have been superseded by later general legislation.

4. Wakefield Corporation Act, 1924.

This Act gives powers with regard to waterworks, water supply and other matters, and also with regard to public health and sanitary matters.

The public health provisions were fully set out in the Annual Report of 1924.

The following Acts have been adopted :—

Infectious Diseases (Prevention) Act, 1890 (except Section 4 which is practically the same as Section 23 of the Wakefield Corporation Act, 1887).

Public Health Amendment Act, 1890 (except Part I.).

Public Health Amendment Act, 1907 (except Sections 18, 25, 48, 78, 80, 82, 83, 92 and 94).

Wakefield Corporation Act, 1887.

Wakefield Improvement Act, 1877.

Wakefield Corporation Act, 1909.

Wakefield Corporation Act, 1924.

In order to bring local legislation into conformity with the Public Health Act, 1925, the Minister of Health, by order, dated 16th August, 1927, repealed certain sections in the above local Acts. The Sections particularly affecting public health repealed in the 1924 Act, are as follows :—

Section 101 (Medical Inspection of inmates of common lodging houses, etc., when infectious diseases prevail).

Section 103 (For preventing contact with body of person who has died of infectious disease).

Section 105 (Removal of person suffering from pulmonary tuberculosis to hospital).

Section 109 (Houses infested with vermin to be cleansed).

Section 111, paragraphs (a) and (b) in sub-section (1) (for regulating manufacture and sale of ice-cream, etc.).

Section 112 (sanitary regulations for premises used for sale, etc., of food for human consumption).

Section 113 (no place used for storage, etc., of human food to be used as a sleeping place).

Section 123 (defining establishment of a new business).

The above Sections are now replaced by the corresponding ones in the Public Health Act, 1925.

The following Byelaws relating to the public health are in force :—

1. Decent conduct of persons using sanitary conveniences, 1896.
2. Cleansing of footways and pavements and removal of house refuse, 1896.
3. Nuisances, 1896.
4. Common Lodging Houses, 1896.
5. Nuisances in connection with the removal of offensive or noxious matter.
6. Offensive Trades, 1914.
7. Slaughterhouses, 1925.
8. New Streets and Buildings, 1926.
9. Houses let in Lodgings, 1926.
10. Municipal Slaughterhouses, 1926.

SANITARY CIRCUMSTANCES OF THE AREA.

Water Supply.

I am obliged to the Waterworks Engineer (C. C. Smith, Esq., M.Inst., C.E.) for the following particulars of the Water Supply :—

Quantity. The rainfall during 1928 was about 12 per cent. above the average, and fairly evenly distributed throughout the year, trade was slack and the supply was ample at all times.

Extensions of Supplies. The only extensions for giving additional supplies have been in connection with housing schemes. The Stanley U.D.C., who take water in bulk, have been laying a new 12" main 3 miles long to obtain better pressure in their high level areas, and the Corporation are arranging to instal booster pumps.

New Works. The trunk main (21 miles of 22" and 20" pipes) in connection with the new Ryburn Scheme was practically completed, together with the tunnel, bridges, balancing tank, etc., but at the end of the year had not been brought into use.

When completed and tested it will enable water to be taken direct from the Ryburn Stream pending the construction of reservoirs.

The construction of the Ryburn Dam (concrete 100 ft. high) was begun, the excavation for foundations and cut-off trench completed and the placing of concrete begun. The work will occupy three or four years more.

The installation of pressure filters was completed and the period of 12 months' test and maintenance by the Makers (The Candy Filter Co., Ltd.) entered upon. The filters, which are designed to treat 2,600,000 gallons per day, and to supplement the existing open sand beds, gave satisfactory results.

(**Note.**—The period has since expired and the filters have been approved and accepted).

Quality and Analyses. This has been satisfactory. The gathering ground is moorland and the risk of contamination is remote. Increased filtration is dealt with above.

Lime is added to impart alkalinity and prevent plumbosolvency in connection with both systems of filtration, and the filtered waters mingle in the same clear water tank. Titration tests for alkalinity are constantly made at the Town Hall.

There is a small laboratory in the new filter houses, and the contractors have made daily tests.

Mr. W. T. Burgess, F.I.C., of London, the Corporation's consulting chemist for the new plant has made several visits, analyses and reports.

The resignation of Dr. Chaplin caused an interruption in the usual analyses, but later in the year arrangements were made with the West Riding Rivers Board. The appended analyses which were made by the Board on the termination of the test period for the new filters will give the most typical indication of the nature and quality of the water in all its stages, and by both processes until it reaches the consumer's tap.

WAKEFIELD CORPORATION WATERWORKS.—ANALYSES OF WATER BY W.R. RIVERS BOARD.

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	RAW WATER from		FILTERED WATER.			
	Ringstone Jaw Hill.	Ardley after Lime Treatment Jaw Hill.	Open Sand Filters Jaw Hill.	Mechanical Filters Lindale Hill.	From Tap in Town.	
Number and Date	25/2/29	25/2/29	25/2/29	25/2/29	26/2/29	
Physical Characteristics :—Liquid	v. sl. turbid	clear	clear	clear, bright and colourless	v. sl. turbid	
Odour	v. slight minute	v. slight none	v. slight none	v. slight	v. slight minute	
Sediment	sl. acid	neutral	v. sl. alkaline	v. small brownish	grey neutral	
Reaction				v. sl. acid		
Results of Analysis :—(In parts per 100,000) :—						
Total Solids	7.12 (Ash 4.96)	9.08 (Ash 6.60)	11.60 (Ash 8.56)	9.28	9.56 (Ash 7.36)	
Solids in Suspension (dried at 100° C.)	—	—	—	0.12	—	
Solids in Suspension, Ash	—	—	—	0.12	—	
Solids in Solution (dried at 100° C.)	—	—	—	9.16	—	
Solids in Solution, Ash	—	—	—	6.72	—	
Chlorides (In terms of Sodium Chloride)	2.13	2.00	2.00	2.00	2.00	
Ammoniacal Nitrogen from free and saline ammonia	0.0495	0.0300	nil	0.0476	0.0178	
Albuminoid Nitrogen (Wanklyn)	0.0048	0.0018	0.0009	0.0039	0.0018	
Nitrous Nitrogen from Nitrates	nil	nil	nil	nil	nil	
Nitric Nitrogen from Nitrates	0.020	0.040	0.080	0.040	0.040	
Oxygen absorbed in 4 hrs. from N/20 permanganate at 80° F.	0.118	0.069	0.022	0.081	0.067	
" " 3 mins.	0.030	0.020	0.006	0.018	0.016	
Alkalinity in terms of CaCO ₃ to MO	—	0.50	1.63	0.75	0.63	
Acidity in terms of CaO to MO	0.46	—	—	—	—	
Hardness (in terms of CaCO ₃)—Total	6.4	6.1	6.4	7.0	6.3	
Permanent	6.4	6.1	6.4	7.0	6.3	
Temporary	nil	nil	nil	nil	nil	
Lead	nil	nil	nil	nil	nil	
Copper	0.03	—	—	—	—	
Plumbosolvency (Lead taken up in 24 hours)	0.83	0.08	0.12	0.08	0.20	
Presumptive B. coli in 100 c.c. sample	absent	present—absent in 1 c.c.	absent	absent	absent	
	nil	3	4	1	nil	

Rivers and Streams, Sewerage, Scavenging, etc.

The conditions remain substantially the same as given in the 1925 Report.

Closet Accommodation.

The Closet accommodation in the City is as follows :—

Water Closets (including	390	
trough closets)	13,360	
Privies	162	
Tub Closets	28	
Number of Privy Closets converted into Water Closets during 1928	144	
Number of additional Water Closets provided in connection with above	—	
Number of Tub Closets converted into Water Closets during 1928	38	
Number of additional Water Closets provided in connection with above	1	
Number of Trough Closets converted into Washdown Closets during 1928	4	
Number of additional Water Closets provided in connection with above	—	
Number of Privy Closets in addition to above dispensed with	18	
Number of Tub Closets in addition to above dispensed with	3	
Total Privy Closets abolished	162	
Total Tub Closets abolished	41	
Total Trough Closets abolished	4	

During 1928, 140 Privy Closets and 38 Tub Closets were converted into Water Closets under Section 39 of the Public Health Act (Amendment) Act, 1907. The cost to the Corporation in carrying out these works was £917 0s. 10d. for Privy Closets and £419 6s. 0d. for Tub Closets. More Closets were converted in 1928 than in any previous year we have records of, and, as the above figures indicate, the abolition of all those Privy and Tub Closets which it is practicable to abolish will be completed within the next two years.

NUMBER OF PRIVIES AND TUB CLOSETS AT THE END OF 1928.

Ward.	No. of Privy Buildings.	No. of Privy Closets.	No. of Privy Middens.	No. of Dwelling Houses Served.	If used for Workshops &c.	No. of Tub Closets.	No. of Dwelling Houses Served.	If used for Workshops &c.	Total No. of Privies and Tub Closets.
Alverthorpe ..	4	4	4	4	—	—	—	—	4
North Westgate ..	5	6	4	7	—	4	3	1	10
South Westgate ..	10	12	10	14	—	6	2	1	18
St. John's ..	—	—	—	—	—	—	—	—	—
Eastmoor ..	—	—	—	—	—	—	—	—	—
Northgate ..	—	—	—	—	—	2	2	—	2
Kirkgate ..	2	3	2	2	1	3	—	2	6
Primrose Hill ..	1	1	1	1	—	8	6	1	9
Calder ..	9	26	8	10	3	2	2	—	28
Belle Vue ..	28	44	28	45	1	—	—	—	44
Sandal ..	50	66	51	84	—	3	3	—	69
Total ..	109	162	108	167	5	28	18	5	190

SANITARY INSPECTION OF THE AREA.
SYNOPSIS OF SANITARY INSPECTION WORK, 1928.

	Inspections.	Re-Inspections.
Number of Inspections made ..	12,292	1,421
„ „ Complaints received ..	855	—
„ „ Complaints confirmed ..	744	—
„ „ Nuisances found	606	—
„ „ Informal Notices served..	560	—
„ „ Statutory Notices served	146	—
„ „ Notices outstanding at end of 1928	3	—
„ „ Summonses issued ..	—	—
„ „ Premises where work was carried out by verbal notice or without notice	161	—
„ „ Letters sent	156	—
„ „ Matters referred to City Surveyor	129	—
„ „ Matters referred to Water- works Engineer ..	42	—

SUMMARY OF INSPECTION WORK.

Dwelling Houses.

Ordinary	178	118
<i>Re</i> Infectious Diseases	434	224
<i>Re</i> Housing and Town Planning Acts	99	326
Water Closets	328	188
Privies and Tub Closets	789	87
Ashplaces and Ashbins	161	25
Urinals	33	11
Yards and Courts	239	11
Dangerous Structures	1	1

Drains.

Inspections	510	238
Smoke Tests	66	1
Water Tests	—	—
Chemical Tests	7	—

Sewers, etc.

Ventilation	15	3
Street Gullies	45	—

Inspections. Re-Inspections.

Factory and Workshops, etc.

Factories	10	2
Workshops (excluding Bakehouses)	140	10
Workshops (including Restaurant Kitchens and Stables)	75	17
Bakehouses	72	3
Outworkers	2	—

Miscellaneous.

Canal Boats	33	1
Van Dwellings	20	—
Common Lodging Houses	198	13
Houses Let in Lodgings	84	39
Cowsheds	152	13
Dairies, Milkshops and Milkstores	159	29
Ice Cream Premises	59	4
Private Slaughterhouses	3,150	—
Do. (Special Notices)	179	—
Corporation Slaughterhouse ..	936	—
Borough Market	112	—
Cattle Market	2	—
Butchers' Shops	209	—
Fishmongers' Shops and Stalls ..	192	—
Cold Storage	—	—
Offensive Trade Premises (including Fish Frying Premises)	377	46
Piggeries	23	4
Smoke Observations	532	—
Wells	—	—
Meetings with Owners and Trades- men	1,001	—
Special Visits	1,540	3
Visits under Rats and Mice Destruc- tion Act	13	—
Visits to Houses of Entertainment	17	4
Miscellaneous (including Cesspools, Water Courses, Refuse Tips, etc.)	100	—

SUMMARY OF SANITARY IMPROVEMENTS CARRIED OUT UNDER PUBLIC HEALTH ACTS.

Dwelling Houses.

Cleansed or Limewashed	..	..	..	..	45
Overcrowding abated	..	..	..	..	16
Lighting improved	..	..	..	..	4
Ventilation improved	..	..	..	..	20
Roofs repaired	..	..	..	..	64
Eaves Spouts or Rain Water Fall Pipes repaired	..	..	..	..	102
External Walls, Chimneys, etc., repaired or re-pointed	..	..	..	..	39
Inside Walls, Ceilings, etc., repaired	..	..	..	..	20
New Floors laid or repaired	..	..	..	..	13
Doors repaired	..	..	..	..	7
Yards re-laid or repaired	..	..	..	..	15
Water Supply improved	..	..	..	..	11
New Water Supply laid on	..	..	..	..	2
Yards cleansed..	..	..	..	..	5
Living Vans removed	..	..	..	..	2
Fireplaces, etc., repaired	..	..	..	..	34
Stairways repaired	..	..	..	..	9
Food Stores improved	..	..	..	..	—
Washing Accommodation improved	..	..	..	..	9

Drains.

Opened out for inspection	..	..	..	..	69
Repaired	..	..	..	..	22
Re-constructed	..	..	..	..	74
Inspection Chambers constructed	..	..	..	..	88
Drains choked	..	..	..	..	1,465
Drains cleansed by Corporation Drain Cleanser	..	..	..	..	1,370
Drains cleansed by Owners	..	..	..	..	95
Drains or Drain Inlets inside buildings removed	..	..	..	..	6
Drains ventilated	..	..	..	..	61
Disconnected from Sewers	..	..	..	..	60
Rain Water Fall Pipes disconnected from Drains or Sewers	..	..	..	..	2
New Drains provided	..	..	..	..	60

Accumulations Removed.

Manure	..	..	..	..	17
Other	..	..	..	..	17
Manure Pits provided	..	..	..	..	5

Animals, Fowls, etc.

Nuisances abated	19
--------------------------	----

Ashbins, Ashplaces, etc.

Movable Galvanised Iron Ashbins renewed ..	2
Movable Galvanised Iron Ashbins provided in lieu of Ashpits	165
Dry Ashpits abolished	82
Dry Ashpits repaired	2
Tub Closets or Privies with Ashpits repaired ..	—

In addition the following were referred to the City Surveyor :—

Movable Galvanised Iron Ashbins requiring renewal	116
Dry Ashpits requiring repairs	12

Urinals.

Urinals cleansed or improved	3
New Urinals provided	9

Sinks.

New Sinks provided	33
Sink Waste Pipes trapped, renewed or repaired ..	39
Other Waste Pipes trapped, renewed or repaired ..	2

Piggeries.

Cleansed or improved	9
Swine removed	—

Cesspools.

Repaired or improved	1
Abolished	—

Water Closets.

Cleansed or Limewashed	32
Repaired	104
Additional provided	29
Re-constructed	11

SUMMARY OF SANITARY IMPROVEMENTS CARRIED OUT UNDER HOUSING ACTS.

Dwelling Houses.

Lighting improved	5
Ventilation improved	37
Roofs repaired	19
Eaves Spouts or Rain Water Fall Pipes repaired ..	24

External Walls, Chimneys, etc., repaired or re-pointed	43
Inside Walls, Ceilings, etc., repaired	22
New Floors laid or repaired	20
Fireplaces, Ovens or Set Pots repaired	3
Washing Accommodation provided	10
Yards re-laid or repaired	3
Doors repaired	23
Food Stores provided or improved	—
Stairways repaired	3

Drains.

Repaired	1
Drains or Drain Inlets inside Buildings removed ..	—
Rain Water Fall Pipes disconnected from Drains or Sewers	1

Sinks.

New Sinks provided	12
Sink Waste Pipes trapped, renewed or repaired ..	8
Other Waste Pipes trapped, renewed or repaired	—

Water Closets.

Additional provided	—
Repaired	6

Ashplaces.

Movable Galvanised Iron Ashbins renewed ..	—
Dry Ashpits repaired	—

COMMON LODGING HOUSES.

Number on Register at end of 1928.	For both Sexes.	For Men only.	Number of Persons registered for.
18	9	9	673

Defects.	Found.	Remedied.
Cleansing	5	5
Water Closets ..	5	5
Drains	3	3

Defects.	Found.	Remedied.
Structural	5	5
Urinals	6	6
Dampness	1	1
Ashbin	1	1

During the year the Common Lodging Houses, with one exception, have been kept in a satisfactory condition, and no change has taken place in the accommodation at the houses.

HOUSES LET IN LODGINGS.

Number on Register at end of 1928	47
Number taken off during the year	7
Number put on during the year	Nil.
Total accommodation (adults) at end of year	754

Defects.	Found.	Remedied.
Cleanliness	17	17
Structural	9	9
Drainage	2	2
Water Closets	3	3
Water Supply	1	1

During the year 6 houses have been discontinued as Houses Let in Lodgings. It has been necessary to serve 5 Informal Notices for contraventions under the Houses Let in Lodgings Byelaws during the year. The contraventions were as follows :—

No means of water supply	4
No means of cooking	4
No provision made for storage of food ..	5
Insufficient water closet accommodation ..	2

ANNUAL REPORT of the Medical Officer of Health for the year 1928, for the County Borough of Wakefield, on the administration of the Factory and Workshops Act, 1901, in connection with :—

Factories, Workshops and Workplaces.

1.—Inspection of Factories, Workshops and Workplaces.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises. 1	Number of		
	Inspections. 2	Written Notices. 3	Occupiers Prosecuted. 4
Factories (including Factory Laundries) ..	12	2	—
Workshops (including Workshop Laundries) ..	225	4	—
Workplaces (other than Outworkers' premises)	94	—	—
Total	331	6	—

2.—Defects found in Factories, Workshops and Workplaces.

Particulars. 1	Number of Defects.			Number of Offences in respect to which Prosecutions were Instituted. 5
	Found. 2	Remedied. 3	Referred to H.M. Inspector. 4	
Nuisances under the Public Health Acts :—				
Want of Cleanliness	4	4	—	—
Want of Ventilation	1	1	—	—
Overcrowding	—	—	—	—
Want of Drainage of floors	—	—	—	—
Other Nuisances	5	5	—	—
Sanitary accommodation. { insufficient	6	6	—	—
{ unsuitable or defective	2	2	—	—
{ not separate for sexes	—	—	—	—
Offences under the Factory and Workshop Acts :—				
Illegal occupation of underground bakehouse (S. 101)	—	—	—	—
Other offences :—				
(Excluding offences relating to outwork and offences under the sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops, Transfer of Powers) Order, 1921.	—	—	—	—
Total	18	18	—	—

3.—Outwork in Unwholesome Premises, Section 108.

It has not been necessary to deal with any premises under this Section.

4.—Registered Workshops.

Workshops on the Register (S. 131) at the end of the Year.						Number.
Bakehouses (Factories) .. .. .	..	..	..	..	..	10
Bakehouses (Workshops) .. .. .	..	..	..	..	..	25
Dressmaking .. .. .	..	..	..	..	..	10
Saddlery .. .. .	..	..	..	..	..	3
Boot Repairing .. .. .	..	..	..	..	..	14
Millinery .. .. .	..	..	..	..	..	4
Upholstery .. .. .	..	..	..	..	..	4
Tailoring .. .. .	..	..	..	..	..	8
Joinery .. .. .	..	..	..	..	..	9
Other Workshops .. .. .	..	..	..	..	..	44
Total ..						121

During the year 5 notices were received from H.M. Inspector of Factories regarding the following matters :—

Defects.	Found.	Remedied.
Insufficient Closet Accommodation ..	3	3
Insufficient Ventila- tion	1	1
Want of Cleanliness	1	1

ATMOSPHERIC POLLUTION.

Emission of Smoke from Industrial Chimneys.—1928.

TABLE I.

No. of Boilers.	No. of Observations.	Dense Black Smoke.—Minutes in the Hour.											
		Nil	$\frac{1}{2}$	1	2	3	4	5	5-10	10-15	15-20	20-25	25-30
1	103	92	2	2	3	—	1	—	2	1	—	—	—
2	21	14	—	2	2	—	—	—	—	3	—	—	—
3	294	234	22	19	10	2	5	—	2	—	—	—	—
4	13	10	1	1	—	1	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	—	—	—	—
6	8	2	1	2	2	1	—	—	—	—	—	—	—
7	93	58	6	15	3	2	1	1	7	—	—	—	—
Total	532	410	32	41	20	6	7	1	11	4	—	—	—

TABLE II.

No. of Boilers.	No. of Observations.	Dense Black Smoke.—Minutes in the Half-Hour.											
		Nil	$\frac{1}{2}$	1	2	3	4	5	5-10	10-15	15-20	20-25	25-30
1	103	95	2	2	—	1	1	—	2	—	—	—	—
2	21	19	—	1	—	1	—	—	—	—	—	—	—
3	294	273	6	9	3	2	—	1	—	—	—	—	—
4	13	13	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	—	—	—	—
6	8	8	—	—	—	—	—	—	—	—	—	—	—
7	93	59	5	9	10	3	2	—	5	—	—	—	—
Total	532	467	13	21	13	7	3	1	7	—	—	—	—

TABLE III.

Year.	No. of Observa- tions.	Black Smoke.—Minutes in the Hour.—Percentage.													
		Nil.	1	2	3	4	5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45
1923	257	34.6	11.2	7.3	5.8	6.6	7.7	11.6	5.0	4.2	3.5	1.1	0.3	0.3	—
1924	740	44.7	10.4	7.1	7.0	5.1	4.8	10.6	6.0	2.4	0.8	0.4	0.2	—	—
1925	318	52.2	12.2	10.6	9.6	3.4	3.4	5.0	1.5	0.6	0.9	—	—	—	—
1926	315	48.6	14.6	5.7	4.1	4.1	2.2	13.7	1.9	1.5	1.5	0.9	—	0.3	0.6
1927	925	57.9	9.5	8.6	2.2	5.4	0.2	8.8	4.7	0.6	1.2	0.1	0.3	—	—
1928	532	77.1	6.0	5.2	2.4	2.8	0.9	2.6	1.8	0.3	0.5	—	—	—	—

NOTE.—The smoke emission from chimneys of metallurgical furnaces are excluded from the above records. For the purpose of comparison the half minute records made in 1927 and 1928 have been doubled in Table III.

TABLE IV.
MONTHLY RECORD OF SOOT DEPOSITS IN
STANDARD GAUGES, 1928.

Month.	Tons of Total Solids per Square Mile.	
	Northgate Station.	Clarence Park Station.
January	42.41	21.10
February	32.70	19.95
March	36.75	21.61
April	28.29	11.26
May	26.43	18.35
June	33.36	22.59
July	18.83	5.87
August	25.33	14.91
September	19.09	8.00
October	25.41	24.96
November	25.85	12.00
December	19.09	7.81
Average per Month ..	27.79	15.7

During 1928 it was necessary to serve 8 Notices of Offence under the Public Health (Smoke Abatement) Act, 1926, regarding the emission of Black Smoke, and 4 Notices of Offence regarding the emission of Dense Smoke.

Remarks on Smoke Abatement.

Although we cannot claim that the air of Wakefield is as clean as it ought to be, and the facts revealed by Table IV., as well as ordinary observation, would not allow us to do so, yet considerable progress towards a cleaner atmosphere has been made during the year. After all, we can only effectively deal with industrial smoke, and it is noteworthy that the percentage of observations of factory chimneys emitting no black smoke has increased from 35 per cent. in 1923 to 58 per cent. in 1927, and to 77 per cent. in 1928. This is indeed a great achievement, and with continued effort, still greater results should be obtained. We have worked all along on lines of education and persuasion, and I am more and more convinced that these are the right lines to follow. The co-operation of the local Smoke Abatement Committee has continued to be most helpful, and so has that of the Education Committee, which has continued its course of lectures for stokers at the Technical College. Probably this educational work amongst the stokers has helped more than anything else to reduce the amount of black smoke emitted. At the course of lectures on Boiler Efficiency and Smoke Abatement given by Mr. Dickenson, M.I.M.E., at the Technical College during 1928, 23 enrolled, 15 sat for the examination, 3 were ineligible, 2 failed and 10 passed. The examination included a written and oral examination, as well as a practical test in a boilerhouse, and certificates were given to those who passed. It is to be hoped that employers will appreciate the fact that the men who have obtained these certificates are technically trained men, and trained in boiler efficiency, as well as in smoke abatement, and that in consequence, their services should have an enhanced value to the employer.

I have again to express my indebtedness to Mr. Garner, the Deputy Chief Inspector and Chemist at the West Riding Rivers Board, for carrying out the analyses of soot deposits, and to Mr. Bailey, the Parks Superintendent, and his Assistants, for looking after the Gauge at Clarence Park.

HOUSING STATISTICS FOR 1928.

Number of Houses erected during the year.

(a) Total (including number given separately under	
(b)) 	184
(b) With State assistance under the Housing Acts :—	
(i) By the Local Authority 	135
(ii) By other bodies or persons 	—

1.—Unfit Dwelling Houses.

Inspection—

(1) Total number of Dwelling Houses inspected for Housing Defects (under Public Health or Housing Acts) 	426
(2) Number of Dwelling Houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910, or the Housing Consolidated Regulations, 1925	99
(3) Number of Dwelling Houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation 	41
(4) Number of Dwelling Houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation 	385

2.—Remedy of Defects without service of formal notice.

Number of Defective Dwelling Houses rendered fit in consequence of Informal Action by the Local Authority or their Officers 	363
---	-----

3.—Action taken under Statutory Powers.**A.—Proceedings under Section 3 of the Housing Act, 1925.**

(1) Number of Dwelling Houses in respect of which notices were served requiring repairs 	14
(2) Number of Dwelling Houses which were rendered fit after service of formal notices :—	
(a) By Owners 	22
(b) By Local Authority in default of Owners	—
(3) Number of Dwelling Houses in respect of which Closing Orders became operative in pursuance of declarations by Owners of intention to close	—

B.—Proceedings under Public Health Acts.

(1) Number of Dwelling Houses in respect of which notices were served requiring defects to be remedied	19
(2) Number of Dwelling Houses in which defects were remedied after service of formal notice :—	
(a) By Owners	19
(b) By Local Authority in default of Owners	—

C.—Proceedings under Sections 11, 14 and 15 of the Housing Act, 1925.

(1) Number of Representations made with a view to the making of Closing Orders	4
(2) Number of Dwelling Houses in respect of which Closing Orders were made	4
(3) Number of Dwelling Houses in respect of which Closing Orders were determined, the dwelling houses being rendered fit	1
(4) Number of Dwelling Houses in respect of which Demolition Orders were made	4
(5) Number of Dwelling Houses demolished in pursuance of Demolition Orders	2

Fitness of Houses.

(1) The general standard of housing has already been described (see Report for 1925).

(2) The general character of defects found is indicated by the following table, which enumerates the different defects found during an inspection of 99 houses, which were mostly of a poor class, but not situated in the scheduled insanitary areas :—

Dilapidated	55	With Water Closet	
Damp	48	defects	23
With defective Lighting	20	With Tub Closets or Privies	—
With defective Ventilation	53	With Ashbin or Ash-place defects	17
Dirty	5	With Yard Surface defects	13
Overcrowded	5	With Nuisance from keeping of Animals or Poultry	—
With Drain and Sink defects	52	With other Nuisances or defects	90

HOUSING STATISTICS FOR 1928.

Size of House according to Number of Habitable Rooms.	Total.	Built by Corpor- ation.	Built by Private Enterprise.			With Baths.		
			Total.	Subsidy.	Non- Subsidy.	Total.	In Bath room.	In Scullery
3 roomed ..	—	—	—	—	—	—	—	—
4 „ ..	112	108	4	—	4	112	112	—
5 „ ..	45	27	18	14	18	45	45	—
6 „ ..	20	—	20	—	20	20	20	—
7 „ and over	7	—	7	—	7	7	7	—
Total ..	184	135	49	14	49	184	184	—

The new houses erected in each of the Wards is as follows :—

Alverthorpe ..	18	St. John's ..	1
North Westgate (including 130 on Lupset Estate) ..	131	Calder ..	6
South Westgate (including 5 built by Corporation for sale on the Thornes Road Estate) ..	16	Sandal ..	12

Remarks on Housing.

The number of new houses built in 1928, namely :—184, appears very small when compared with the number built in 1927, namely :—1,182, but the latter, of course, represents an abnormal spurt in municipal house building. The number of Municipal Houses built in 1928, was 135, including 5 for sale, and in 1927, the number was 1,081, including 55 for sale. The number of houses built by private enterprise in 1928 was 48, including 14 subsidy houses, and in 1927, the number was 101, including 76 subsidy houses. The number of new houses built in 1928 while providing accommodation for about twice the natural increase of population cannot be regarded as sufficient to satisfy the demand for houses, for I understand that there is still a waiting list of about 300 families who desire municipal houses.

The number of house inspections made under the Housing Regulations was considerably less than usual, and this is accounted for by the fact that the work of the Sanitary

Inspectors was considerably increased in other directions, particularly in food inspection. However, the appointment of an additional District Inspector at the end of the year should enable more housing work to be carried out during 1929. The houses inspected during 1928 were mostly of a poor type, as is indicated by the conditions found. 73 per cent. were noted as not in all respects reasonably fit for human habitation, 8 per cent. were in a state dangerous or injurious to health, 55 per cent. were dilapidated, and 48 per cent. were damp. During the year 385 houses were repaired, 363 through informal notices and 22 through formal notices served under the Housing Act. 4 houses were closed under Orders and 2 were demolished. 10 houses in respect of which demolition orders were made in 1927, were still standing at the end of 1928, one remaining occupied, and also two houses on which Demolition Orders had been made during 1928. The experience we have had with these houses indicates the great difficulty of closing houses without being able to offer alternative accommodation which will both be suitable and within the financial capacity of the tenants. The subject is at the present time receiving the serious consideration of the Corporation, and I trust that something will be done which will enable us to proceed more actively with the closure of insanitary houses.

MILK SUPPLY.

Registration of Cowkeepers, etc.

Cowkeepers and Milk Purveyors resident in the City	18
Milk Purveyors resident in the City.. ..	112
Milk Purveyors from outside the City	27
	<hr/> 157

No Cowkeepers were added to the Register during 1928.

3 Cowkeepers discontinued business during 1928.

26 Milk Purveyors were added to the Register during 1928.

12 Milk Purveyors discontinued business during 1928.

Dairies.

Defects.	Found.	Remedied.
New Dairies provided	7	7
Floors repaired ..	2	2

Cowsheds.

Defects.	Found.	Remedied.
Limewashing ..	5	5

Bacteriological Examinations of Milk.

During 1928, 20 samples of Milk taken in Wakefield were bacteriologically examined at the County Hall Laboratory. Nine were samples of Wakefield produced Milk, and eleven of Milk produced outside. The following table gives a summary of the findings as regards bacterial content :—

Total Bacteria in I.c.c.	Number of Samples.
Under 5,000	—
5,000 and under 10,000	1
10,000 and under 50,000	8
50,000 and under 100,000	5
100,000 and under 500,000	5
500,000 and under 1,000,000	—
1,000,000 and under 2,000,000	—
2,000,000 and under 3,000,000	—
3,000,000 and under 4,000,000	1

One of the samples was of Milk sold as Grade “ A ” and was satisfactory.

Apart from the graded Milks, 6 samples came up to the bacterial standard of Grade “ A ” Milk.

21 samples of Milk were examined by animal inoculation for tuberculous infection, and all gave negative results as compared with 19 per cent. in 1927, and 10·5 per cent. in 1926.

Sediment in Milk.

47 samples of Milk were tested for sediment by the City Analyst with the following results :—

Parts per 100,000.	Total Samples.	Produced in City.	Produced outside.
0—1	35	12	23
1—2	9	1	8
2—3	3	—	3
3—4	—	—	—
4—5	—	—	—
Total ..	47	13	34

The above figures show that 74·4 per cent. of the samples contained less than 1 part of sediment per 100,000, and that 95·5 per cent. contained less than 2 parts per 100,000. These figures are about the same as those of 1927, when the corresponding figures were 75·6 per cent. and 92·7 per cent.

Quality of Milk.

71 samples of New Milk were examined by the City Analyst for quality, and 7 (9·8 per cent.) were reported as adulterated. This percentage is higher than that for England and Wales in 1927-28 (6·9 per cent.). The following table gives the average composition of the samples excluding those which fell below the standard.

Composition of Milk Samples taken during 1928.

Month.	Number of Samples.	Average Fat.	Average Non-fatty solids.
January	14	3·46	8·92
February	2	3·3	8·69
March	—	—	—
April	—	—	—
May	—	—	—
June	15	3·84	9·03
July	4	3·45	8·88
August	3	3·31	8·76
September	—	—	—
October	8	3·82	9·03
November	12	3·48	8·95
December	6	3·91	9·21
Whole year	64	3·57	8·93

The Milk (Special Designations) Order, 1923.

Number of Licences in operation during 1928 . . . 8

In each case the Licence is to retail Grade " A " Milk in the City.

All the Milk sold under the Milk (Special Designations) Order is produced outside the City.

Grade " A " Milk (Tuberculin Tested) is supplied to the Municipal Hospitals of the City.

Remarks on the Milk Supply.

The supervision of the milk supply has been continued on the same lines as described in the 1925 Report, and one can say that the improvement previously noted has been continued and extended. Three of the local milk producers gave up business during the year, and two of these had very unsuitable premises which are not now used for dairy purposes. Another milk producer transferred his business from old and unsuitable cowsheds to a re-modelled and very satisfactory building. At the present time considerable improvements of cowsheds and dairies required under the Milk and Dairies Order, 1926, are in hand, and when completed should bring the Wakefield cowsheds up to a satisfactory standard, so far as buildings are concerned. There is also evidence that in the handling of the milk, increased attention is being paid to cleanliness and the general hygienic rules of milk production. In fact, out of the samples of ordinary milk tested bacteriologically, 37 per cent. had a bacterial content within the limits allowed for Grade " A " Milk, and whilst this must not be taken as saying that such milk was as good as Grade " A " Milk, because there is no guarantee that the standard would be maintained day by day, still the fact may be regarded as indicative of progress in the production of clean milk both within and without the City. The tests for sediment are also corroborative, for 95 per cent. of the samples tested fell within the limits generally fixed by analysts, namely :—2 parts per 100,000, whilst 74 per cent. contained half of this amount or less. There has also been a progressive improvement in the results of these tests. For the five years, 1919—1923, the number of samples with less than 1 part per 100,000 was 29 per cent., and during the five years 1924—1928, the number was 55 per cent., whilst in 1927 and 1928, the number was 74 per cent. In 1928 no sample contained more sediment than 3 parts per 100,000.

Another satisfactory feature in the year's records is the absence, for the first time in our records, of tubercular infection from all the samples tested by animal inoculation. It would be rash to conclude from this that no milk with tubercular infection is now being sold, but the tests, so far as they go, do indicate that the risks of tubercular infection have been considerably reduced, and no doubt will continue to be further reduced, if not altogether eliminated in course of time. It seems to me that the work under the Tuberculosis Order is helping considerably to eliminate infective animals from dairy herds. With the improved quality of milk, we would expect to find more milk consumed, but unfortunately, this does not appear to be the case. A census taken by the Chief Sanitary Inspector in 1928 showed the total amount of milk supplied daily in the City was 2,102 gallons, of which 569 gallons was produced within the City and 1,533 without. Excluding the amounts consumed in public institutions, the average amount of liquid milk consumed in Wakefield is now as low as 0.28 of a pint per head per day. A similar census made in 1923 gave the average consumption at 0.32 of a pint per head per day. Not only has the total consumption of milk in the City been reduced, but the production of milk within the City has also dropped, there being 75 fewer milch cows at the end of 1928 than at the end of 1923. A medical man cannot always conscientiously endorse the various trade slogans which are sounded abroad from time to time, but that which entreats us to "Drink More Milk" is one which I certainly can wholeheartedly support. Milk is an article with an extraordinary high food value, and, for children particularly, is unique and irreplaceable. Medical support for milk propaganda would have been greater in the past if greater reliance could have been placed on the cleanly production and distribution of milk, and on its freedom from tuberculous infection. There is now no difficulty in getting clean milk. If a guarantee of cleanliness is desired, graded milk can be obtained, but most milk supplied in Wakefield is reasonably clean. One cannot speak so confidently with regard to tuberculous infection and the only safe way is either to purchase Certified or Grade "A" (Tuberculin Tested) Milk, as the Corporation does for its own hospitals, or to boil ordinary milk. At any rate, we will all be the better for Drinking More Milk, and the average daily consumption should be a pint, instead of little more than a quarter of a pint as it is at present.

ANALYSIS OF FOOD AND DRUGS.

(a) Samples Taken.

Nature of Article.	Total.	Number of Samples taken for Analysis.		Number found Adulterated.		Percentage Adulterated.	
		Informal.	Formal.	Informal.	Formal.	Informal.	Formal.
Milk (Quality) ..	71	1	70	—	7	—	10%
Milk (Cleanliness) ..	47	1	46	—	3	—	6.5%
Milk, Grade " A " ..	2	—	2	—	—	—	—
Pepper ..	2	2	—	—	—	—	—
Sponge Mixture ..	1	1	—	—	—	—	—
Cake Flour ..	1	1	—	—	—	—	—
Ground Ginger ..	2	2	—	—	—	—	—
Jam ..	5	5	—	2	—	40%	—
Blanc Mange ..	2	2	—	—	—	—	—
Carbonate of Magnesia ..	2	2	—	—	—	—	—
Borax ..	2	2	—	—	—	—	—
Malt Vinegar ..	6	5	1	1	1	20%	100%
Coffee ..	2	2	—	—	—	—	—
Liquorice Powder ..	2	2	—	—	—	—	—
Butter ..	3	3	—	—	—	—	—
Cream ..	7	6	1	1	1	16.6%	100%
Sponge Cakes ..	3	3	—	—	—	—	—
Dried Milk ..	6	6	—	1	—	16.6%	—
Patent Foods ..	2	2	—	—	—	—	—
Tincture of Iodine ..	2	2	—	—	—	—	—
Epsom Salts ..	2	2	—	—	—	—	—
Milk of Sulphur ..	2	2	—	—	—	—	—
Pork Sausage ..	5	5	—	—	—	—	—
Beef Sausage ..	2	2	—	—	—	—	—
Dripping ..	3	3	—	—	—	—	—
Sweet Spirits of Nitre	5	5	—	3	—	60%	—
Ipecacuanha Wine ..	3	2	1	1	1	50%	100%
Shredded Suet ..	1	1	—	—	—	—	—
Custard Powder ..	4	4	—	—	—	—	—
Baking Powder ..	3	3	—	—	—	—	—
Cheshire Cheese ..	2	2	—	—	—	—	—
Paregoric ..	2	2	—	—	—	—	—
Camphorated Oil ..	3	3	—	—	—	—	—
Olive Oil ..	3	3	—	—	—	—	—
Mincemeat ..	2	2	—	—	—	—	—
Total ..	212	91	121	9	13	9.8%	10.7%

(b) Particulars of Adulterated Samples.

No.	Article.	Defect.	Action taken.
5	New Milk ..	3.7 per cent. deficiency of Milk Fat.	
17	Dried Milk ..	Deficiency of Non-fatty Solids equal to 3.2 per cent. added water ..	Vendor warned.
20	New Milk ..	25.52 per cent. of Fat present instead of at least 26 per cent.	Vendor warned.
36	New Milk ..	14 per cent. deficiency of Milk Fat ..	Follow up Sample genuine, No. 131.
45	Cream ..	2.7 per cent. deficiency of Milk Fat ..	Vendor warned.
54	New Milk ..	Contained 0.34 per cent. of Boric Acid	Follow up Sample No. 61 taken.
55	New Milk ..	Deficiency of Non-fatty Solids equal to 2.3 per cent. added water.	Sunday Sample.
58	New Milk ..	15.3 per cent. deficiency of Milk Fat ..	Vendor warned.
61	Cream ..	Deficiency of Non-fatty Solids equal to 15.7 per cent. added water.	Sunday Sample.
63	New Milk ..	2.64 per cent. deficiency of Milk Fat	Vendor prosecuted.
68	Raspberry Jam	Contained 0.06 per cent. of Boric Acid	Fined £5 and 10/6 Costs.
69	Malt Vinegar	Non-fatty Solids 8.24 per cent. Fat 2.94 per cent.	Vendor warned.
71	Sweet Spirit of Nitre.	64.09 per cent. Soluble Solids present whereas 69 per cent. are desirable ..	Cream produced outside City.
72	Do. ..	Sample "Doubtful"	Producer prosecuted and Fined.
74	Raspberry Jam	Artificial Vinegar composed of dilute Acetic Acid with small amount of colouring substance added.	"Appeal to Cow" Sample.
75	Ipecacuanha Wine.	Contained only 77.6 per cent. of the amount required by British Pharmacopoeia ..	Vendor warned.
80	Sweet Spirit Nitre.	Contained only 75.7 per cent. of the amount of Nitrous Ether as required by British Pharmacopoeia ..	Follow up Sample No. 85 taken.
		61.12 per cent. Soluble Solids present, whereas 65 per cent. are desirable ..	Vendor warned.
		Sample "Doubtful."	Vendor warned.
		Sample contained only 45 per cent. of Alkaloids required by British Pharmacopoeia.	Follow up Sample No. 86 taken.
		Contained only 59.2 per cent. of the amount of Nitrous Ether as required by British Pharmacopoeia ..	Vendor warned.

No.	Article.	Defect.	Action taken.
85	Malt Vinegar	Contained 95 per cent. of coloured and diluted Acetic Acid, and was wrongly described as Malt Vinegar	Vendor warned.
86	Ipecacuanha Wine.	Sample contained only 78 per cent. of Ipecacuanha Alkaloids required by British Pharmacopoeia	Vendor warned.
106	New Milk ..	Sample "Doubtful." Sample contained 20 parts of Sediment per million parts.	Milk produced outside City, and Vendor warned by Local Authority of area where Milk was produced.
107	Do.	Sample contained 20 parts of Sediment per million parts.	Milk produced outside City, and Vendor warned by Local Authority of area where Milk was produced.
128	Do.	Sample contained 20 parts of Sediment per million parts.	Vendor warned. Milk produced outside of City, and producer warned by Local Authority of area where Milk was produced.

Slaughterhouses.

There are 23 private slaughterhouses in the City (8 registered and 15 licensed) and one Public Slaughterhouse belonging to the Corporation.

	In 1920.	In January, 1928.	In December, 1928.
Registered	9	8	8
Licensed	17	15	15
Total ..	26	23	23

Public Health (Meat) Regulations, 1924.

Infringement.	Found.	Remedied.
Gut scraping in Slaughterhouse ..	1	1
Covering of Meat	1	1
Sheeting of Stall	1	1

Number of Animals Slaughtered in the City during 1928.

	Beasts.	Calves.	Pigs.	Sheep.	Horses.	Total.
Public Slaughterhouse	4092	301	3325	6416	—	14134
Private Slaughter-houses.	2044	213	4239	3697	—	10193
Total for Year ..	6136	514	7564	10113	—	24327

Condemnations of Unsound Food.

1,885 Meat .. .. .	..	..	..	..	Weighing 9,751 Stones
8 Fish .. .. .	..	..	..	..	„ 40 „
Total .. .. .	..	..	..	..	9,791 „

12 Tinned Goods 961 Tins.

Where Condemnations made.

1,355 Borough Slaughterhouses.	6 Shops.
514 Private Slaughterhouses	11 Warehouses.
5 Railway Stations	1 Piggery.
3 Borough Markets.	

Number of Carcases, etc., Condemned.

Animals.	Total Whole Carcases.	Total Part Carcases.	Tubercular Disease.		Other Conditions.	
			Whole Carcases.	Part Carcases.	Whole Carcases.	Part Carcases.
Bovines	180	84	163	79	17	5
Pigs	70	1	30	1	40	—
Sheep	31	12	—	—	31	12
Calves	5	1	1	—	4	1
Total	286	98	194	80	92	18

	1928.	1927.
Percentage of Condemnations due to Tubercular Disease	68.2	70.0
Percentage of Bovines affected with Tubercular Disease	13.8	15.3
Percentage of Pigs affected with Tubercular Disease	6.1	7.9
Percentage of all Animals Slaughtered in City affected with disease	7.7	8.7
Percentage of all Animals Slaughtered in Private Slaughterhouses affected with disease	5.2	5.8
Percentage of all Animals Slaughtered in Public Slaughterhouses affected with disease	9.5	10.7

All the diseased Carcases, etc., with two exceptions, were voluntarily surrendered, and it was not necessary to take any legal action.

Remarks on Food Inspection.

The number of animals slaughtered in Wakefield for food during 1928 was 24,327, being an increase of 1,302 over 1927, and an increase of 3,271 over 1926. The increase was wholly at the Corporation Slaughterhouse which appears to be increasingly used as a convenient centre for the district. It is also the practice for cows taken under the Tuberculosis Order not only in Wakefield itself but in the surrounding district to be sent to the Corporation Slaughterhouse for slaughter and inspection. During 1928, in addition to the 4 animals taken from Wakefield cowsheds, 29 cows were sent to the Slaughterhouse from outside cowsheds under the Tuberculosis Order. Although there was an increase in the number of seizures, the percentage of seizures was reduced from 10.7 (1927) to 9.5 in the Corporation Slaughterhouse, and from 5.8 (1927) to 5.2 in the Private Slaughterhouses. Notwithstanding the abnormal introduction of tuberculous animals as noted above, the percentage of seizures for tuberculosis was also slightly reduced. The humane slaughtering byelaw continues to work satisfactorily. The transference of the meat stalls from the open market into the new building has been a great improvement, and so has been the re-paving of the yard and floors of the Corporation Slaughterhouse.

OFFENSIVE TRADES.

List of Offensive Trades at end of 1928.

Trade.	Number.
Tripe Boiling	6
Gut Scraping	1
Rag and Bone Dealing	6
Fish Frying	59

Offensive Trades taken off Register during 1928 .. Nil.

Offensive Trades put on Register during 1928 .. Nil.

Defects.	Found.	Remedied.
Cleansing	4	4
Refuse Receptacles	4	4
Preparation Rooms (Fish Fryer)		
improved	16	16
Yards paved and improved	2	2
Structural	3	3

PREVALENCE OF, AND CONTROL OVER INFECTIOUS DISEASES.

Notification of Infectious Diseases, 1928.

DISEASE.	Number of Cases Notified.													Number of Deaths.													No. of Cases
	At all Ages.	Under 1 yr.	1—2 yrs.	2—3 yrs.	3—4 yrs.	4—5 yrs.	5—10 yrs.	10—15 yrs.	15—20 yrs.	20—35 yrs.	35—45 yrs.	45—65 yrs.	65 & Over.	At all Ages.	Under 1 yr.	1—2 yrs.	2—3 yrs.	3—4 yrs.	4—5 yrs.	5—10 yrs.	10—15 yrs.	15—20 yrs.	20—35 yrs.	35—45 yrs.	45—65 yrs.	65 & Over.	
Smallpox	11						2	1		2		6															
Cholera																											
Plague																											
Diphtheria, including																											
Membranous Croup..	44		2	1	3	2	14	15	3	4				2		1		1									
Erysipelas	16								1	2		2	7	4													
Scarlet Fever .. .	104		1	8	2	7	35	24	16	11				1						1							
Typhus Fever .. .																											
Enteric Fever .. .	5					1		1	1	1		1		1					1								
Relapsing Fever ..																											
Continued Fever ..																											
Puerperal Fever ..	4									4																	
Cerebro-Spinal Meningitis	1	1												1	1												
Poliomyelitis .. .																											
Ophthalmia Neonatorum	16	16																									
Primary Pneumonia ..	50		3	3	2	5	4	3	4	8	3	11	4	38	6	4	1	1		1	1	1	1	13	4	5	
Influenzal Pneumonia ..	6						1			2		3															
Dysentery	9								1	3	1	2	2														
Malaria																											
Pulmonary Tuberculosis	64			2			2	6	11	22	11	10		37							1	2	16	10	8		
Non-Pulmonary																											
Tuberculosis .. .	18		1	1	2		2	4	2	3	2		1	12	1		2		2				5	1	1		
Measles	61	8	6	9	12	26								2						1							
Whooping Cough ..	37	3	10	6	7	11								2	2												
Acute Polio-																											
Encaphalitis .. .																											
Acute Encephalitis																											
Lethargica .. .																											
Trench Fever .. .																											
Puerperal Pyrexia ..	11								1	9	1																
Food Poisoning .. .	2					1	1																				
Totals .. .	459	28	23	30	28	53	61	54	40	71	20	40	11	96	10	6	3	2	3	3	2	3	22	24	13	5	1

Smallpox.

11 cases of Smallpox were notified during 1928, as compared with 10 in the previous year. The 11 cases comprised 4 adult males, 4 adult females, and 3 children, all girls. One case occurred in January, one in March, 2 in April, 4 in May, and 3 in August. So far as we could ascertain, these 11 cases represented 7 distinct outbreaks, of which 5 had only one known case each, one had 2 cases and one had 3 cases. With these several outbreaks, spread over a period of eight months, and all of them providing many opportunities for the dissemination of the infection, we were very lucky to get off with so few

cases. It was a curious coincidence that the disease was first introduced into the City during 1928 from County Durham, just as happened at the beginning of the previous year. Most of the cases were of a mild character, and all the patients recovered. With regard to their vaccinal condition, none of the 5 younger patients (aged 7, 7, 14, 22 and 29 years) had ever been vaccinated, whilst the 6 older patients (aged 54, 53, 53, 50, 49 and 49 years) had only been vaccinated in infancy. One of the child patients was the only one in the family that had never been vaccinated. 6 of the patients were removed to Meltham Smallpox Hospital, 3 to Wortley Smallpox Hospital, 1 to Sherburn Smallpox Hospital and 1 to Dewsbury Smallpox Hospital.

The following are a few particulars of each of these Cases.

1. Female, 29 years, vagrant, residing in Common Lodging House in New Street. Notified 23rd January, 1928. This woman had tramped from Durham to Leeds, commenced to be ill in Leeds on the 15th January, and came to Wakefield on the 20th January, 1928. Source of infection probably in County Durham.
2. Male, 22 years, rag gatherer, residing in Common Lodging House in Providence Street. Had lived in Wakefield three months. Case discovered through a report from the Deputy Lodging House Keeper on the 14th March, 1928. Onset about 8th March, 1928. Source of infection not ascertained.
3. Male, 54 years, coal miner, residing in Charles Street, Primrose Hill. Notified on the 3rd April, 1928, from the Receiving Ward of the Workhouse, to which he had just been admitted. Onset on the 25th March, 1928. Source of infection not ascertained.
4. Male, 49 years, foundryman, living in South Street, Primrose Hill. Notified 29th April, 1928. Onset 24th April, 1928.
5. Male, 49 years, foundry labourer, living in Tavern Street, Primrose Hill. Notified 3rd May, 1928. Onset 27th April, 1928. It is highly probable that Cases 4 and 5 were infected by an overlooked case which was traced during our investigations.
6. Female, 7 years, Charles Street, Primrose Hill. Notified 14th May, 1928. Onset 9th May, 1928. This case may possibly have been infected by Case No. 4.

7. Female, 7 years, Lupset. This case was discovered on the 17th May, 1928, through information given by a School Attendance Officer. Onset, 11th May, 1928. Source of infection not ascertained.
8. Female, 53 years, no occupation, Gill's Yard, Northgate. Notified 24th May, 1928. Onset 21st May, 1928. Source of infection not ascertained.
9. Female, 53, patient in the White Rose Hospital, where she had resided three weeks before onset. Notified 6th August, 1928. Onset 2nd August, 1928. Source of infection not ascertained.
10. Female, 53 years, patient in the White Rose Hospital, where she had resided 15 years. Notified 28th August, 1928. Onset 23rd August, 1928. Probably infected by Case 9, both having occupied the same Ward in the White Rose Hospital.
11. Female, 14 years, Old Crown Yard. Case discovered on the 30th August, 1928, through information given by the Normanton Medical Officer of Health. Onset about 2 weeks before.

The family of this girl had removed from Normanton to Wakefield 3 days before the case was discovered. On the 30th August, 1928, the Medical Officer of Health of Normanton telephoned that a brother of this girl had returned to Normanton on the previous day to see his doctor, that he had been found to be suffering from Smallpox, and had forthwith been removed to the Normanton Smallpox Hospital. Upon visiting the house, we found this girl to be affected with Smallpox of about 2 weeks' duration, and also discovered that two other sisters had probably had Smallpox over a month previously, but had never been notified. This was confirmed by the fact that out of all the unvaccinated family contacts, these two girls were the only ones who did not respond to vaccination carried out by us.

Diphtheria.

44 cases of Diphtheria were notified, giving an attack rate of 0.77, as compared with 1.02 in 1927 and 0.96 the average for the preceding 10 years. There were 9 fewer cases than in 1927. The cases were generally distributed over the City, the highest number (6) being in North Westgate and Sandal Wards, and the lowest number (1) in Eastmoor Ward. 25 cases occurred

in the first quarter of the year, 9 in the second, 2 in the third, and 8 in the fourth quarter. 39 (90 per cent.) of the cases were removed to the Fever Hospital. There were two deaths, giving a case mortality of 4.5 per cent., and a death rate of 0.04 per 1,000 as compared with 0.04 in 1927, and 0.04 the average for the preceding 10 years. The corresponding death rate in England and Wales was 0.06 and in the Great Towns, 0.09.

Scarlet Fever.

104 cases of Scarlet Fever were notified giving an attack rate of 1.84 per 1,000, as compared with 1.3 in 1927, and 2.48 the average for the preceding 10 years. There were 32 more cases than in 1927. The largest number of cases occurred in Sandal Ward (21), and the smallest in Alverthorpe and Belle Vue Wards (3 each). 26 cases occurred during the first quarter of the year, 30 during the second, 14 during the third, and 34 during the fourth quarter. There was one death, giving a case mortality of 0.96 per cent. and a death rate of 0.02 per 1,000, as compared with 0.02 in 1927, and 0.01 the average for the preceding 10 years. The corresponding death rate in England and Wales was 0.01, and in the Great Towns, 0.02. The fatal case appeared to be one of the malignant type, so rarely seen at the present time, and the patient died at home, within 24 hours of the onset. 99 (95 per cent.) of the cases were removed to Hospital. There were 6 return cases (6 per cent. of the patients discharged) related to 6 patients discharged from the Fever Hospital. Apart from the return cases, there were 3 secondary cases, 2 of which occurred in one house.

Scarlet Fever and Home Conditions.

Of the 81 ordinary dwellings invaded, 36 had less than 2 persons per room, 39 between 1 and 2 persons per room, and 6 more than 2 persons per room. 7.4 per cent. of the houses were overcrowded, according to the standard of the Registrar General.

Home	{	Under 14 years—135 (Susceptible—135).
Contacts.		Over 14 years—267 (Susceptible—262).

Amongst the 135 susceptible contacts under 14 years, there occurred 6 return cases and 2 secondary cases. Amongst the 262 susceptible contacts over 14 years there occurred no return cases and one secondary case.

Houses with Secondary Cases.	{	Under 1 person per room	.. —
		1—2 persons per room	.. 1 case.
		Over 2 persons per room	.. 2 cases.

Houses with Return Cases.	Under 1 person per room	.. 3 cases.
	1—2 persons per room	.. 3 cases.
	Over 2 persons per room	.. —

These figures do not indicate any relationship between overcrowding and the domiciliary spread of Scarlet Fever, and agree with previous findings.

Enteric Fever.

There were 5 cases of Enteric Fever notified, giving an attack rate of 0·09 per 1,000, as compared with 0·21 in 1927 and 0·17 the average for the previous 10 years. There was 1 death, giving a case mortality of 20 per cent., and a death rate of 0·02 per 1,000 as compared with 0·04 in 1927, and 0·03 the average for the preceding 10 years. The corresponding death rate in England and Wales was 0·01, and in the Great Towns 0·01. The following are the particulars of the 5 cases :—

No.	Sex.	Age.	Home Address.	Where Isolated.	Bacteriological Report.	Date.
1	F.	32	West Riding Mental Hospital.	West Riding Mental Hospital	—	January.
2	F.	4	Hastings Avenue, Sandal.	Home	B. Para. A. & B.	April. Died 18th April.
3	M.	15	Rutland Avenue, Sandal.	Hospital ..	B. Para. A. & B.	April.
4	F.	11	Alverthorpe Road	Hospital ..	B. Para. B.	September.
5	M.	57	Pilkington Street ..	Hospital ..	B. Para. B.	September.

Pneumonia.

56 cases of Pneumonia were notified (50 primary and 6 influenzal); 17 in the first quarter, 14 in the second, 10 in the third, and 15 in the fourth quarter of the year. Of the notified cases, 15 died. There were 23 deaths from pneumonia where the illness had not been notified.

Dysentery.

There were 9 cases of Dysentery notified, all patients in the West Riding Mental Hospital. There were no deaths.

Measles.

61 cases (all children under 5 years, and all first cases in the household), were notified as compared with 413 cases in 1927, and 22 in 1926. 2 were notified in the first quarter, 33 in the second, 23 in the third, and 3 in the fourth quarter. 47 cases were notified through the schools.

There were 2 deaths, giving a death rate of 0.04, as compared with 0.32 in 1927, and 0.14 the average for the preceding 10 years, and in both cases, the immediate cause of death was broncho-pneumonia.

Whooping Cough.

There were 37 cases of Whooping Cough notified (all children under 5 years, and all first cases in the household), compared with 7 in 1927.

There were 2 deaths, both children under one year of age, and in both the immediate cause of death was broncho-pneumonia. The death rate was 0.04 as compared with 0.02 in 1927, and 0.10 the average for the preceding 10 years.

Cerebro-Spinal Meningitis.

One case of Cerebro-Spinal Meningitis was notified, a child aged four months old, and the patient died in the Fever Hospital.

Polio-Myelitis, Polio-Encephalitis, Encephalitis Lethargica, and Malaria.

No cases of the above diseases were notified. There were, however, 2 deaths from Encephalitis Lethargica during the year, and neither of these had been notified. One was a woman 20 years of age, whose illness appeared to have commenced four years previously, and she had passed into a condition of helpless paralysis. The other was a man 54 years of age, whose illness had extended over a period of two years.

Food Poisoning.

Two cases of food poisoning were notified under Section 126 of the Wakefield Corporation Act, 1924, and inquiries showed that both were cases of urticaria due probably to food sensitiveness, but were not cases of food poisoning in the ordinary sense of the term.

INFECTIOUS DISEASES HOSPITAL.

Statistics, 1928.

Disease.	No. of Cases remaining 1st Jan., 1928.	No. of Cases admitted 1928.	Total Cases treated 1928.	No. of Cases Discharged 1928.	No. of Deaths 1928.	Mortality percentage 1928.	No. of Cases remaining 31st Dec., 1928.
Scarlet Fever ..	15	99	114	99	—	—	15
Diphtheria ..	4	39	43	39	2	4.6	2
Enteric Fever..	—	3	3	3	—	—	—
Diphtheria Carriers.	—	3	3	3	—	—	—
Cerebro-Spinal Meningitis.	—	1	1	—	1	100.0	—
Ophthalmia Neonatorum.	—	1	1	1	—	—	—
Varicella ..	—	1	1	1	—	—	—
For Observation	—	8	8	7	1	—	—
Totals ..	19	155	174	153	4	2.3	17

The observation cases included 5 cases of suspected smallpox, all of which proved to be that disease, and were transferred to the Smallpox Hospital; one case of suspected Diphtheria; 2 cases of suspected Scarlet Fever, one case of which was a child also affected with Empyema, admitted from the Clayton Hospital, and which died from the chest disease.

The maximum number of patients on any day was 29 (March), the minimum 3 (September), and the average 14. The maximum number of Scarlet Fever cases was 19 (December), the minimum, none (September), and the average 10. The maximum number of Diphtheria cases was 15 (March), the minimum 1 (July and October), and the average 4.

Scarlet Fever.

The maximum period of stay was 91 days, the minimum 20 and the average 34 days. 4 cases were admitted on the 1st day of disease, 40 on the 2nd, 32 on the 3rd, 10 on the 4th, 5 on the 5th, 2 on the 6th, and 5 after the 7th day.

Complications occurred as follows :—

	On Admission.	After Admission.
Rhinitis	10 (10%)	3 (3%)
Otorrhoea	4 (4%)	4 (4%)
Cervical Adenitis	8 (8%)	20 (20%)
Rheumatism	—	5 (5%)
Nephritis	—	3 (3%)
Tonsillitis	1 (1%)	4 (4%)
Pneumonia	1 (1%)	—

Diphtheria.

The maximum duration of stay was 124 days, the minimum 20 days, and the average 41 days. The diagnosis was revised in one case. One case admitted as Diphtheria was also suffering from Scarlet Fever on admission.

Complications occurred as follows :—

	On Admission.	After Admission.
Rhinitis	4 (10%)	1 (2.5%)
Otorrhoea	1 (2.5%)	1 (2.5%)
Cervical Adenitis	12 (30%)	3 (7.5%)
Paralysis	1 (2.5%)	2 (5.1%)
Albuminuria	3 (7.5%)	—
Cardiac Disease	2 (5%)	1 (2.5%)
Rheumatism	—	1 (2.5%)
Antitoxin Rashes	—	2 (5%)

Tracheotomy was performed in one case of laryngeal diphtheria and the patient recovered. 3 cases contracted Scarlet Fever from a case sent in as Diphtheria and found, after admission, to be also affected with Scarlet Fever. 1 patient was admitted on the 1st day of the disease, 10 on the 2nd, 12 on the 3rd, 4 on the 4th, 5 on the 6th, 2 on the 6th, 1 on the 7th, 1 on the 8th, 1 on the 9th, 1 on the 14th, and 1 on the 15th. Of the 2 fatal cases, one was admitted on the 5th day, and the other on the 8th day. One was 18 hours in hospital, and the other 3 hours before death.

280,000 units of Antitoxin were given to 35 patients, the maximum dose being 16,000 units, the minimum 4,000 units, and the average 8,000 units.

Enteric Fever.

Three patients were admitted on the 9th, 15th and 23rd day of disease, and remained in Hospital 89, 42 and 58 days. 1 case had a relapse. Another patient had intestinal perforation on the 104th day of disease, was removed to the Clayton Hospital for operation and recovered.

Remarks on Infectious Disease.

The prevalence of infectious disease during 1928 was comparatively low, and we were not disturbed by epidemics of any kind. Smallpox invaded the City on several occasions during the year, but fortunately, on each of these occasions, we were able to stay the spread of infection. The local experience of the past two years goes to show that the type of smallpox now generally occurring in England is easily controllable by prompt and thorough administrative measures, provided of course that the foci of infection are recent and not too extensive. The experience also goes to prove the efficacy of vaccination as a preventive of smallpox. Every one of our cases under 30 years of age had never been vaccinated, and the older ones had been vaccinated in infancy but never re-vaccinated.

Here I might interpose a word on that vexed subject, vaccination. Personally, I have the utmost confidence in vaccination and re-vaccination as a means of preventing smallpox. As Sir George Newman has said, "No one need have smallpox unless he wishes to have it." There is therefore much to be said for compulsory vaccination. There is, however, little to be said for the present vaccination law, which is only compulsory in name. I think the time has come when vaccination ought to be made either compulsory in fact as well as in name, or the vaccination law repealed, and the subject left on a purely voluntary basis. It is quite probable that just as many children would be vaccinated without any compulsory law as are vaccinated at the present time. I think, however, that there should be powers to require compulsory vaccination of contacts of actual cases of smallpox who have not been vaccinated or re-vaccinated within, say, 10 years. During 1928, a Report on Vaccination was issued by the Committee appointed by the Ministry of Health. The recommendations of this Committee are as follows :—

“(1) In place of the officially advocated four insertions, trial be made of vaccination and re-vaccination in one insertion with a minimum of trauma, and that multiple scarification and cross-hatching be deprecated.

“(2) Primary vaccination be performed in infancy, between the ages of two and six months, as at present, and that revaccination be offered at the time when a child enters school (five to seven years) and again on leaving (14 to 16 years).

“(3) Vaccination in multiple insertions be available for such persons as desire to obtain the maximum protection against smallpox obtainable at one operation.

“(4) In public vaccination parents be informed that if, in consequence of vaccination, a child requires medical attention, it is the duty of the public vaccinator concerned to provide such attention without cost to the parents.

“(5) Instead of the one inspection now required in the case of public vaccination there be two; the first not earlier than the 7th or later than the 10th day, and the second not earlier than the 14th or later than the 17th day.

“(6) A partial reversion to the principle of stational vaccination be considered.

“(7) The syllabus of instruction in vaccination of medical students be revised in the light of present day knowledge and of these recommendations.

“(8) Experimental observations be made to ascertain if it is feasible to increase the dilution of vaccine lymph beyond the present degree without impairing its efficacy.

“(9) Provision be made for the continuance of experimental investigation with a view to the furtherance of knowledge of vaccinia and of the virus diseases in general, with special reference to the pathogenesis of the complications which occasionally follow those diseases.

“(10) Steps be taken to impress upon the public mind the nature and purpose of vaccination.”

The Report points out that the number of deaths attributed to vaccinia has greatly diminished since the Act and Order of 1898 came into force, but that the nature of the risks, with one exception, remains substantially the same as before 1898.

Although sepsis is still the chief risk, investigations, both in this country and abroad, have brought to light an occasional association between vaccinia and acute diseases of the central nervous system, particularly encephalitis. The Committee, however, points out that this form of complication is very rare indeed in primary vaccinations in infancy and in re-vaccinations. Early infancy is therefore the best time for primary vaccination.

DISINFECTION.

During 1928, the Hospital Porters carried out the following disinfecting work :—

No. of Houses disinfected	235	No. of Pillows disinfected	566
„ Rooms „	505	„ Bolsters „	352
„ Schools „	5	„ Curtains „	304
„ Classrooms „	16	„ Carpets „	262
„ Times disinfectant		„ Rugs „	232
„ used	516	„ Boots „	369
„ Beds „	431	Men's Clothing „	713
„ Mattresses „	359	Women's Clothing „	1040
„ Blankets „	623	Children's „ „	1308
„ Sheets „	700	Miscellaneous	828
„ Counterpanes	481		

PATHOLOGICAL AND BACTERIOLOGICAL EXAMINATIONS.

During the year 1,151 specimens from the City were examined at the County Bacteriological Laboratory :—

Hair (Ringworm)	165	Blood	3
Throat Swabs (Diphtheria)	313	Pus	3
Sputum	236	Fluid	12
Urine	2	Faeces for Dysentery ..	2
Pus	7	Milk	22
Fluid	4	Water Analysis	1
Urine	12	Blood (Wassermann) ..	230
Faeces	24	For detection of Spiro-	
Blood	22	chaetes	2
Urine	67	For detection of	
Faeces	1	Gonococci	23
			Total ..1151

TUBERCULOSIS.

Notification.

During 1928, 64 cases of pulmonary tuberculosis (34 males and 30 females) and 18 cases of non-pulmonary tuberculosis

(8 males and 10 females) were notified. In 1927, the corresponding numbers were 68 and 24. Of the 64 pulmonary cases, 13 died before the end of the year. Of the 18 non-pulmonary cases, 4 died before the end of the year. The 18 non-pulmonary cases comprised 3 Cervical Glands, 6 Abdominal, 3 Meninges, 5 Joints, 1 Kidney.

New Cases and Mortality during 1928.

Age Periods.	New Cases.				Deaths.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
0—1	—	—	—	—	—	—	1	—
1—5	1	1	2	2	—	—	1	3
5—10	1	1	1	2	—	—	—	—
10—15	4	2	2	1	—	1	—	—
15—20	3	7	—	2	1	1	—	—
20—25	3	7	—	—	2	2	—	—
25—35	5	7	1	2	6	6	4	1
35—45	9	3	1	1	8	2	1	—
45—55	2	2	—	—	3	1	—	—
55—65	6	—	—	—	4	—	—	1
65 and upwards ..	—	—	1	—	—	—	—	—
Totals ..	34	30	8	10	24	13	7	5

Of the 37 persons who died from pulmonary tuberculosis, 21 (57 per cent.), had previously received sanatorium treatment, and 2 were actually in the Sanatorium at the time of their death. The condition of these 23 on admission to the Sanatorium was as follows :—

Stadium I. and { - T.B. }	3	Stadium II. and { + T.B. }	15
Stadium I. and { + T.B. }	1	Stadium III. and { T.B. }	1
Stadium II. and { - T.B. }	2	Stadium III. and { + T.B. }	1

It will be noted that only four of the Sanatorium cases were admitted in the early stage of the disease, and of these one had already tubercle bacilli in the sputum.

The following periods intervened between the date of notification and the date of death, in the pulmonary cases :—

Under 1 month	..	..	5	12—18 months	..	..	Nil.
1—3 months	..	..	8	18—24 months	..	..	1
3—6 months	..	..	8	Over 24 months	..	..	7
6—12 months	..	..	6	Not notified	..	..	2

27 (35 per cent.) of the deaths occurred within 12 months of notification. 2 pulmonary and 8 non-pulmonary deaths had never been previously notified. The doctors who attended the two pulmonary cases stated that as the patients had been previously attended by other doctors for the same complaint, they assumed that the cases had already been notified. In the non-pulmonary cases, the diagnosis had apparently been made so shortly before death that it was thought that notification would serve no useful purpose. As 7 of the 8 deaths were from Meningeal Disease, in which the symptoms are often obscure and the illness short, this explanation might very well serve.

PULMONARY TUBERCULOSIS.

Cases left on the Register on the 31st December, 1928.

Year Notified.	Total.	Males.	Females	0-15 years.	15-25 years.	25-45 years.	Over 45 years.
1914	1	—	1	1	—	—	—
1915	—	—	—	—	—	—	—
1916	1	1	—	—	—	1	—
1917	1	1	—	—	—	—	1
1918	2	2	—	—	1	1	—
1919	2	1	1	—	1	1	—
1920	8	3	5	2	1	2	3
1921	5	3	2	4	—	1	—
1922	3	1	2	2	1	—	—
1923	7	3	4	1	3	2	1
1924	15	11	4	1	6	6	2
1925	19	8	11	5	2	8	4
1926	33	22	11	10	5	12	6
1927	35	10	25	9	8	12	6
1928	46	21	25	14	13	12	7
Totals	178	87	91	49	41	58	30

Condition of Cases, 31st December, 1928.

Quiescent, working ..	95	Advanced, working ..	—
Quiescent, not working ..	16	Advanced, not working ..	11
Semi-quiescent, working	10	In Sanatorium ..	13
Semi-quiescent, not working	18	In White Rose Hospital..	5
Semi-advanced, working	7		178
Semi-advanced, not working	3		

NON-PULMONARY TUBERCULOSIS.

Cases left on the Register, 31st December, 1928.

Year Notified.	Total.	Males.	Females	0-15 years.	15-25 years.	25-45 years.	Over 45 years.
1913 ..	1	—	1	—	—	1	—
1914 ..	—	—	—	—	—	—	—
1915 ..	—	—	—	—	—	—	—
1916 ..	1	—	1	—	1	—	—
1917 ..	1	—	1	1	—	—	—
1918 ..	1	—	1	1	—	—	—
1919 ..	3	1	2	2	1	—	—
1920 ..	2	1	1	2	—	—	—
1921 ..	—	—	—	—	—	—	—
1922 ..	2	1	1	2	—	—	—
1923 ..	2	1	1	2	—	—	—
1924 ..	4	1	3	2	2	—	—
1925 ..	14	5	9	12	—	2	—
1926 ..	28	16	12	18	3	7	—
1927 ..	8	4	4	5	3	—	—
1928 ..	11	5	6	8	2	1	—
Totals ..	78	35	43	55	12	11	—

Condition of Cases on 31st December, 1928.

Quiescent, working ..	40	Advanced, working ..	2
Quiescent, not working ..	6	Advanced, not working ..	1
Semi-quiescent, working	5	In Sanatorium (Heather-	
Semi-quiescent, not working	2	wood and Kirbymoor-	11
Semi-advanced, working	3	side)	
Semi-advanced, not working	3	In White Rose Hospital..	4
		In West Riding Mental	
		Hospital	1
			Total .. 78

**Public Health (Prevention of Tuberculosis) Regulations, 1925.
Public Health Act, 1925, Section 62.**

It was not necessary to take action under the above statutory provisions during 1928.

TUBERCULOSIS DISPENSARY.

During 1928, 148 persons were referred to the Dispensary for examination or treatment, including 11 who had previously been attending other dispensaries. Of these 62 were found to be tuberculous, 51 with pulmonary and 11 with non-pulmonary disease. 3 cases (pulmonary) remained undiagnosed at the end of the year. 63 contact cases were examined at the Dispensary, and of these, 2 (3·2 per cent.) were found to be affected with Pulmonary Tuberculosis. Of the 53 definite pulmonary tuberculosis cases, 22 (14 males and 8 females) were in Stadium I. (41·5 per cent.), 23 (8 males and 15 females) were in Stadium II. (43·5 per cent.), and 8 (1 male and 7 females) were in Stadium III. (15 per cent.)

Pulmonary Tuberculosis.

MALES.

Stadium I.		Stadium II.		Stadium III.	
T.B. —	T.B. +	T.B. —	T.B. +	T.B. —	T.B. +
6	6	4	7	—	1

FEMALES.

8	2	4	8	2	5
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(NOTE.—Under T.B. — are included cases where no sputum was available or where the sputum was not examined).

Of the 11 cases transferred in from other Dispensaries, 8 were found to be suffering from pulmonary tuberculosis, and 1 from non-pulmonary tuberculosis. The other 2 were diagnosed as non-tuberculous.

The 11 cases of non-pulmonary tuberculosis comprised :—Tuberculous Peritonitis (4), Tuberculous Cervical Adenitis (2), Tuberculous Hip Disease (2), Tuberculous Spine, Tuberculous Knee, and Tuberculous Skin.

30 children were referred by the School Medical Officers, and 6 of these were found to be tuberculous, 4 with pulmonary

and 2 with non-pulmonary disease. 7 cases were referred from the Maternity and Child Welfare Centres, and 3 of these were found to be tuberculous, 2 with pulmonary and 1 with non-pulmonary disease.

Cases of Tuberculosis on the Dispensary Register at the end of 1928.

<i>Pulmonary Cases.</i>			<i>Non-Pulmonary Cases.</i>		
Adults	Males	58	Adults	Males	2
	Females	52		Females	8
Children	Males	17	Children	Males	19
	Females	14		Females	23
Total		141	Total		52

10 patients were X-Rayed at the Clayton Hospital and dental treatment in the form of dentures was provided for 6 patients.

The total attendances at the Dispensary were 1,716. The Tuberculosis Officer made 79 consultations with medical practitioners over suspected cases, 17 at the homes and 62 at institutions. 75 other home visits were made to Dispensary patients, and the nurses made a total of 874 home visits in connection with the investigation and supervision of cases, 792 of these being in connection with Dispensary patients.

No G.P. 17 forms were received from medical practitioners in respect of panel patients, but 30 domiciliary Reports were received in respect of 19 patients.

PULMONARY TUBERCULOSIS.

Sanatorium Treatment.—Mount Vernon Sanatorium.

PATIENTS.	Total.			INSURED.			NON-INSURED.		
	Total	M.	F.	Total	M.	F.	Total	M.	F.
Remaining end of 1927 ..	14	11	3	10	8	2	4	3	1
Admitted 1928 ..	44	24	20	26	20	6	18	4	14
Total treated 1928 ..	58	35	23	36	28	8	22	7	15
Discharged during 1928..	43	21	22	25	17	8	28	4	14
Died in Sanatorium ..	2	2	—	2	2	—	—	—	—
Remaining end of 1928..	13	12	1	9	9	—	4	3	1

It will be noted that 58 persons received treatment in Mount Vernon Sanatorium as compared with 61 in the previous year. Of those treated, 36 (62 per cent.) were insured persons, and 2 were discharged soldiers in receipt of pensions for tuberculosis. 8 were children under 15 years of age.

Condition on Discharge.

During the year, 43 patients were discharged, and of these 2 patients died in the Sanatorium, and 5 sent in as observation cases were discharged as non-tuberculous. The condition on discharge of the remaining 36 is as follows :—

Condition on Admission.		Condition on Discharge.		
		Quiescent.	Improved.	Not Improved.
Stadium I.	T.B. —	8	3	1
(15)	T.B. +	1	1	1
Stadium II.	T.B. —	4	—	1
(14)	T.B. +	—	5	4
Stadium III.	T.B. —	—	—	1
(7)	T.B. +	—	1	5
	Totals ..	13	10	13

Taking all classes, the immediate results of the treatment in the Sanatorium were broadly that one-third of the cases were improved to the extent of quiescence of the disease, one-third were improved, but not to the same extent, and one-third were not improved. Taking the early cases by themselves, we find that 60 per cent. were improved to the stage of quiescence, 26 per cent. were improved but not quiescent, and 14 per cent. were not improved.

Periods of Stay in the Sanatorium.

The periods of stay in the Sanatorium of the above cases were :—

Under 3 months	∴ 8 cases.	9—12 months	.. 2 cases.
3—6 months	.. 14 cases.	12—15 months	.. 6 cases.
6—9 months	.. 3 cases.	15—18 months	.. 2 cases.

The Late Dr. Penny.

I feel that I ought to say a word here on the great loss sustained by Mount Vernon Sanatorium by the tragic death of Dr. Penny early in 1928. In many ways, Dr. Penny had proved himself an ideal medical superintendent of a Sanatorium, combining as he did, an enthusiastic interest in anti-tuberculosis work with an exceptionally engaging personality which secured for him, in a remarkable degree, the confidence and affection of his colleagues and patients. His loss is a very real one, not only to Wakefield and Barnsley, but to the cause of public health generally.

NON-PULMONARY TUBERCULOSIS.

Institutional Treatment.

	Total	Heatherwood Hospital.			Kirkbymoorside Hospital.		
		Total	Males.	Females	Total	Males.	Females
No. of children remaining at end of 1927	7	6	4	2	1	—	1
No. of children admitted during 1928	6	3	2	1	3	1	2
No. of children discharged during 1928	2	1	—	1	1	1	—
No. of children remaining at end of 1928	11	8	6	2	3	—	3

On the 1st April, 1928, the Health Committee took over from the Education Committee the responsibility for the institutional treatment of all tuberculous children of school age, and all classes of the tuberculous now come within the Corporation's scheme for the Treatment of Tuberculosis.

The two cases discharged included a girl with hip disease, who had been at Heatherwood Hospital for two years and three months, and a boy with knee disease who had been in Kirkbymoorside Hospital for a month. The former case was very much improved, and the other only received temporary benefit. The 11 cases remaining in Institutions at the end of the year include 6 cases of Hip Disease (3 boys and 3 girls) 3 cases of Spinal

Diseases (2 girls and 1 boy) a boy with knee disease and a boy with disease of the foot. During the year, a youth with old and quiescent hip disease was discharged from the College at Alton after undergoing two years, vocational training, and a boy of 15 years with quiescent spinal disease was admitted to the same institution for a similar course of training.

Care Work.

The Social Service Council continued its most useful Care Work for the tuberculous during the year, and this has included the provision of clothing for needy persons going to the Sanatorium.

TREATMENT OF VENEREAL DISEASES AT THE VENEREAL DISEASES CLINIC, CLAYTON HOSPITAL, WAKEFIELD, 1928.

(a) Number of Wakefield persons dealt with during the year for the first time and found to be suffering from :—

	Total.	Males.	Females.
Syphilis	33	22	11
Soft Chancre	2	2	—
Gonorrhoea	71	56	15
Conditions other than Venereal	42	31	11
Total ..	148	111	37

(b) Total number of attendances at the Out-Patient Clinic :—

	Total.	Males.	Females.
Syphilis	919	410	509
Soft Chancre	6	6	—
Gonorrhoea	970	568	402
Conditions other than Venereal	181	123	58
Total ..	2076	1107	969

(c) Number of attendances of Wakefield patients for irrigation and treatment (not including attendances at Clinic) :—

Total.	Males.	Females.
3715	2447	1268

(d) Aggregate number of in-patient days of Wakefield patients :—

	Total.	Males.	Females.
Syphilis	34	—	34
Gonorrhoea	12	—	12
Total ..	46	—	46

(e) Number of doses of Arseno-benzol compound (N.A.B. and Sulpharsenol) given to Wakefield patients—461.

LEEDS GENERAL INFIRMARY.—VENEREAL DISEASES CLINIC.

During 1928, 13 patients from Wakefield applied for examination and 10 were found to be suffering from Venereal Diseases (Syphilis 4 and Gonorrhoea 6). The total attendances were 345, as compared with 355 in 1927. The aggregate of in-patient days was nil, and the number of doses of Arseno-benzol compounds given to Wakefield patients was 78.

Pathological Examinations in connection with Venereal Diseases during 1928.

	Total.	For Detec- tion of Spiro- chætes.	For Detec- tion of Gonococci.	Wasserman Re-action.	Other exam- inations.
County Hall Laboratory ..	255	2	23	230	—
Clayton Hospital Clinic	514	—	514	—	—
Leeds Infirmary Clinic	87	—	41	46	—
Total ..	856	2	578	276	—

At the Wakefield Clinic there were 9 more new cases (3 of Syphilis and 6 of Gonorrhoea) than in 1927. The attendances at the Clinic were 101 less, but the attendances for irrigation, etc., were 953 more, and this is a very satisfactory feature indicating that the patients are increasingly taking full advantage of the facilities provided. There has also been a considerable increase in the pathological work both at the Clinic and at the Laboratory, for the number of specimens examined has gone up from 304 in 1927 to 769 in 1928.

Propaganda Work.

The Council of Social Service, as the local branch of the British Social Hygiene Council, continued during 1928, its keen interest in problems associated with Venereal Diseases. In addition to work of a general character it organised a series of three Parents' Conferences. At each Conference, the film "The Gift of Life," was shown and Mr. R. D. Sanders, of the British Social Hygiene Council, -addressed the parents and discussed with them the difficulties experienced in giving instruction and advice to young people on sex matters. Mr. Sanders also addressed a special conference of teachers and social workers, to whom "The Gift of Life" was also shown. This conference was of immense value to those who attended and it undoubtedly prepared the way for further educational work among parents and young people. It is proposed to follow this up in 1929 by film shows and addresses to boys and young men.

In June, a commercial film, "The Dangers of Ignorance" was shown in Wakefield for a week, and at each showing a short address was given by Dr. Allardice and Dr. Eeles.

MATERNITY AND CHILD WELFARE.

Supervision of Midwives.

The usual inspections were regularly made by the Assistant Medical Officer for Maternity and Child Welfare, and it was found that the Rules of the Central Midwives Board were generally complied with. The standard of midwifery in Wakefield has been considerably raised since all the untrained midwives ceased to practice. We continued, however, to have much anxiety from the persistent prevalence of pemphigus neonatorum in the practice of the midwife who was referred to in my last Report. In 1927, this midwife had 18 cases of pemphigus, with 2 deaths, out of 85 confinements attended, and in 1928 she had 23 cases of pemphigus and 2 deaths out of 78 confinements attended. These 23 cases were spread all over the year; 5 in January, 1 in February, 1 in March, 2 in April, 3 in May, 1 in July, 1 in August, 3 in September, 1 in October, 1 in November, and 4 in December. The usual steps to prevent infection were taken. When a case occurred in her practice she was stopped attending other patients, and on concluding her attendance on the pemphigue case, thorough disinfection of clothing, equipment and person were carried out, and also on certain occasions, disinfection of her house. On one occasion the midwife voluntarily agreed to cease practice for three weeks.

(17th May to 7th June). During this and other occasions when she was prevented attending confinements or lying-in cases, the work was done by the Municipal Midwife, but all monies were received by the midwife herself. The midwife has been medically examined on several occasions, but no focus of infection could be discovered. She is clean in her person, home and methods and is most anxious to carry out not only the requirements of the Central Midwives Board, but also any extra requirements which we have imposed on her. She even destroyed a pet dog lest the animal might be connected with the persisting infection. Pemphigus was not confined to the practice of this midwife, but in other cases the disease soon ceased to spread. Six cases occurred in the Maternity Hospital (2 in January, 1 in May and 3 in June), one midwife had 3 cases, one midwife 1 case, and two doctors 1 case each. None of these cases were fatal.

Medical Help.

113 notifications (38 per cent. of births attended by district midwives) of sending for medical help were received from midwives in respect of home confinements. 62 related to mothers and 50 to infants, and 1 to both mother and infant.

For Mother.

Ruptured perineum ..	23	Influenza	1
Prolonged and difficult labour	4	Prolapsed cord	1
Rise of temperature ..	4	History of fits	1
Delayed 2nd stage ..	3	Abdominal pain	1
Breech presentation (extended legs) ..	3	Persistent occipito-posterior	1
Cough	2	Face presentation ..	1
Retained placenta ..	2	Rigid os	1
Postpartum haemorrhage	2	Pain in leg	1
Unable to ascertain presentation ..	2	Fainting	1
Foetal distress ..	2	Inflammation under left arm	1
Inflammation and swelling of leg	2	Offensive lochia	1
Antepartum haemorrhage	2		

For Infant.

Watery blisters ..	17	Bleeding from cord ..	1
Inflamed or discharging eyes	13	Asphyxia	1
		Deformity of foot ..	1

Prematurity	5	Stillborn, before arrival	
Feebleness	3	of midwife	1
Spots on face	2	Deformity	1
Tongue tie	2	Nasal discharge	1
Swelling on head	2	Depressed parietal bone	1

Ante-natal Clinic.

The Ante-natal Clinic is held once weekly at the Maternity Hospital, on Friday afternoons from 2 p.m. onwards. During 1928, 411 mothers attended—371 new cases and 40 who had begun to attend in 1927. 172 were primiparae and 199 multiparas. The total attendances were 1,358, or 491 more than in 1927. 42 cases were referred to the Clinic by midwives practising in Wakefield, and 3 were referred by doctors. Though the Clinic is intended for any expectant mother, irrespective of whether she intends to be confined in the Hospital or not, the vast majority of those attending are patients who have booked with the Hospital. The fact that the Clinic is open to any expectant mother does not seem to be sufficiently clearly understood. Mothers are encouraged to come as early as possible in their pregnancy, and are kept under supervision at regular intervals throughout. Up to the sixth month, a four-weekly attendance is sufficient, from the sixth to seven and a half months, three-weekly, and during the last six weeks fortnightly in normal cases. Abnormal cases attend more frequently. At the 36th week, each patient is thoroughly examined with a view to detecting any abnormal lie, malpresentation or disproportion between the pelvis and the foetus.

The age groups of new cases attending the Clinic in 1928 were as follows :—

Age.	Primiparae.	Multiparae.
Under 20 years ..	26	1
20 to 25 years ..	80	43
25 to 30 years ..	48	70
30 to 35 years ..	10	48
35 to 40 years ..	7	21
Over 40 years ..	1	16
Total ..	172	199

4 per cent. of the women attended before the 4th month of pregnancy. The majority of these came seeking advice for some abnormality or to confirm the diagnosis of pregnancy,

18 per cent. attended for the first time between the 4th and 6th months.

23 per cent. attended for the first time during the 6th month.

20 per cent. attended for the first time during the 7th month.

21 per cent. attended for the first time during the 8th month.

8 per cent. attended for the first time during the last month.

The following abnormal conditions were found :—

Vomiting, heartburn, etc.	66	Contracted pelvis (extreme)	4
Albuminuria (easily controlled by diet) . .	65	Not pregnant	8
Albuminuria (Severe) . .	7	Anaemia	7
Constipation	56	Leucorrhoea	7
Varicose Veins	36	Haemorrhoids	6
Muscular pains and discomforts	34	Antepartum haemorrhage	6
Carious teeth (bad) . .	24	Skin diseases	5
Functional heart murmurs	24	Fainting	4
Organic heart disease	7	Hernia	2
Lung Diseases	16	Breast Abscess	1
Dysuria	13	Mental Instability . .	1
Insomnia	11	Missed abortion	1
Malpresentation	11	Pyosalpinx	1
Contracted pelvis (moderate)	8	Otitis media	1
		Stomatitis	1
		Tonsillitis	1
		Goitre (simple)	1
		Hyperthyroidism	1
		Bartholinian Abscess . .	1

72 per cent. of the patients attending the Clinic had some abnormality or discomfort requiring attention. Breech presentation in multiparae was converted to vertex in 4 cases at the Clinic, without an anaesthetic.

The following cases were admitted to Hospital from the Clinic for treatment :—

Albuminuria (severe) . .	6	Antepartum haemorrhage	1
Malpresentation for correction under anaesthetic	6	Cystitis	1
Heart disease (mitral stenosis and incom- petence)	1	Contracted pelvis	1
		Abdominal pain (for observation)	1

The total of Ante-natal attendances at the Clinic during 1928 was 1,358. The average number per session was therefore 27. Latterly, the attendances have averaged much more than 27—as many as 47 mothers having attended in one afternoon. When the attendance is large, the waiting accommodation is very inadequate.

THE MATERNITY HOSPITAL.

The number of admissions during 1928 was 305, 73 coming from outside the City. 18 were emergency cases, 10 from Wakefield, and 8 from outlying districts. 297 patients were delivered in the Hospital, 265 by midwives and 32 by doctors. Of the remaining 8, 5 were ultimately delivered at home, one on the way to hospital, one was transferred to the White Rose Hospital and one died undelivered. 31 patients were admitted for Ante-natal treatment, 17 from the Ante-natal Clinic and the others from doctors outside.

In the following cases, medical treatment was required for some abnormality :—

(a) Ante-natal.

Albuminuria	15	Eclampsia	3
Hyperemesis Gravidarum	1	Cardiac Disease	1
Epilepsy	1	Umbilical hernia	1
Scabies	1	Malpresentation	6
Antepartum haemorrhage	1	Contracted pelvis	1

(b) During Labour.

Contracted pelvis ..	9	Prolonged second stage ..	5
Rigid perineum ..	2	Foetal distress	2
Placenta praevia ..	2	Uterine inertia	1
Persistent occipito-posterior	3	Transverse lie	1
Eclampsia	3	Ruptured perineum	1
Prolapsed cord ..	3	Adherent placenta	1

(c) After Labour.

Pyrexia	3	Postpartum haemorrhage	3
---------------	---	------------------------	---

The perineum required suturing in 29 cases.

(d) For the Infant.

Slight inflammation of the eyes	6	Cephalhaematoma	1
Skin lesions	7	Still a Bifida	1
Dangerous feebleness ..	3	Ophthalmia neonatorum	1
Premature infants ..	4		

Caesarean Section was performed 7 times, for the following reasons :—

Contracted pelvis 5 (one infant stillborn).
 Central Placenta Praevia 1.
 Eclampsia 1 (both mother and infant died).

Instrumental delivery was required in 21 cases, *i.e.*, 7·1 per cent. The reasons for interference with the normal course of labour were these :—

Foetal distress	..	3	Prolonged second stage	..	6
Contracted pelvis	..	4	Uterine inertia	..	1
Rigid perineum	..	1	Albuminuria (severe)	..	1
Persistent occipito-posterior	..	4	Eclampsia	..	1

There were no cases of Puerperal Fever, and only three of pyrexia. One of these was a mild case of cystitis, another was a case of tonsillitis, and the third a suspected case of early tuberculosis.

One case of Ophthalmia Neonatorum occurred during the year, and responded rapidly to treatment without damage to the eyes. There were 6 cases of sticky eyes, not amounting to Ophthalmia. 6 cases of Pemphigus were notified during the year, two in January and four in June—July. All were slight and cleared up quickly. 17 infants were stillborn and these were the reasons :—

Malpresentation 2 (Spina Bifida 1, Hydrocephalus (macerated) 1). Maternal Albuminuria 4. Antepartum haemorrhage 4. Macerated (cause doubtful) 1. Cord very tightly round neck 1. Difficult labour 2. Prematurity 1. Prolapsed cord 1. Cause doubtful 1.

4 infants died within 10 days of birth. One was premature and feeble; one died from prematurity complicated by maternal eclampsia; one from cerebral haemorrhage following version for placenta praevia, and the fourth from cerebral haemorrhage after a normal delivery.

There were 4 maternal deaths, the following being the causes :—

Status epilepticus	..	1	Eclampsia	..	..	2
Difficult labour (failed forceps outside) and postpartum shock	..	1				

All were emergency cases. The average duration of stay of patients in hospital was 15·75 days.

Training of Pupil Midwives.

The ordinary number of pupil midwives is 8, and altogether 11 (all untrained) were under training during the year. 5 passed the examination of the Central Midwives Board. The pupils attend lectures given at the Leeds Medical School, and receive tutorial and practical instruction from the Matron and Sister of the Hospital.

District Cases.

92 cases were attended by the Municipal District Midwife, and the pupil midwives get experience of home midwifery through attending with the District Midwife.

Post-natal Clinic.

A Post-natal Clinic was commenced in the middle of October at the Maternity Hospital, and is held weekly on Thursdays at 2 p.m. The main object of the Clinic is to keep patients who have been delivered at the Maternity Hospital under supervision until the end of Puerperium proper.

Each patient is examined before discharge from Hospital on the 14th day, and any uterine displacement resulting from the confinement is rectified. Patients who have had a normal confinement are asked to come to the Post-natal Clinic 6 weeks after delivery for a final overhaul. Those who have had some abnormality are asked to return sooner, and are kept under supervision for as long as seems necessary. Mothers attending Welfare Centres who have any complaint connected with their confinement are also encouraged to attend so that they may be thoroughly examined and referred to their own doctor or to the hospital, should continued treatment be required.

Babies not actually requiring circumcision but with badly adherent prepuce are also treated at this Clinic.

The attendance at this Clinic at present is small and consists almost entirely of young mothers with their first or second babies. The older multiparae will come only if they feel that there is something wrong. It is by educating the young mothers to regard post-natal supervision as a routine matter that this branch of maternity work will expand, and that much unnecessary discomfort and ill-health will be prevented.

Between October and December 31st, 52 mothers attended and the attendances totalled 60.

The following abnormal conditions were found and treatment given or advised :—

Retroversions	8	Deficiency of pelvic floor	1
Persistence of red lochia	1	Leucorrhoea	1
Metrorrhagia	3	Chronic Appendicitis ..	1
Debility following Caesarean Section ..	1		

5 patients who had suffered from Eclampsia or severe albuminuria were supervised and dieted. 2 cases of organic heart disease were supervised. 2 cases were referred to the Tuberculosis Dispensary. 30 babies with adherent prepuce were treated during the year.

Puerperal Fever and Puerperal Pyrexia.

During 1928, 15 cases were notified under the Regulations, 11 being cases of Pyrexia and 4 cases of Fever. Of the 11 Pyrexia cases, 7 had been attended at the confinement by a doctor who had been called in by a midwife, and 4 by a midwife only. 3 of the cases were notified from the Maternity Hospital.

Inquiries as to the causes of Pyrexia gave the following results :—

Constipation	2	Pyelitis and Cystitis ..	1
Mastitis	1	Cystitis	1
Tonsillitis	1	Infected vaginal laceration	1
Influenza	1	Mild sapraemia	2
Bronchopneumonia ..	1		

1 case was removed to the White Rose Hospital, and 2 to the Clayton Hospital. There were no deaths.

Of the 4 cases of Puerperal Fever, 3 were attended at the confinement by doctors who in each case had been called by a midwife, and one by a midwife only. One case was admitted to the Clayton Hospital, and one to the White Rose Hospital. There were no deaths.

Ophthalmia Neonatorum.

16 cases of Ophthalmia Neonatorum were notified during 1928. This is 1·5 per cent. of the notified live births. 9 cases were notified in 1927, 7 in 1926, 3 in 1925, 6 in 1924, 11 in 1923, and 19 in 1922.

CASES.			Vision Un- impaired.	Vision Impaired.	Total Blindness.	Deaths.
Cases Notified.	Treated.					
	At Home.	In Hospital				
16	8	8	12	4	—	—

One case occurred in the Maternity Hospital and was treated there. One also occurred and was treated in the Union Infirmary. Five cases were admitted to the Clayton Hospital, and one case to the Fever Hospital for treatment.

HOME VISITING BY HEALTH VISITORS, 1928.

Infant Visiting—Primary Visits	..	..	..	..	1031
Re-Visits (under 1 year)	..	..	..	..	6748
Re-visits (1—5 years)	..	..	..	..	4071
Total Visits	..	..	..	..	11850
Expectant Mothers—Primary Visits	..	..	..	..	118
Re-Visits	..	..	..	..	244
Total Visits	..	..	..	..	362
Visits <i>re</i> Still Births	..	..	..	..	17
Visits <i>re</i> Midwives	..	..	..	..	—
Attendances at Child Welfare Centres	..	..	..	..	291
Attendances at Tuberculosis Dispensary	..	..	..	..	141
Visits to Tuberculous Patients	..	..	..	..	874
Attendances at Medical Inspection of School Children	..	..	..	..	191
Number of Visits to Schools	..	..	..	..	352
Number of examinations at Schools <i>re</i> Cleanliness	..	..	..	..	14808
Number of examinations in School <i>re</i> Treatment	..	..	..	..	148
Number of Homes Visited <i>re</i> Contagious Disease	..	..	..	..	62
Number of Homes Visited <i>re</i> Verminous and Neglected Children	..	..	..	..	144
Number of Homes Visited <i>re</i> Treatment	..	..	..	..	964
Number of Homes Visited for other purposes	..	..	..	..	400
Total number of Homes Visited <i>re</i> School Children	..	..	..	..	1570
Homes Visited <i>re</i> Mental Defectives	..	..	..	..	189
Visits for purposes of Nursing	..	..	..	..	243
Miscellaneous Visits	..	..	..	..	438
Total number of Homes Visited (all purposes)	..	..	..	..	15543

CHILD WELFARE CENTRES.
Numbers on Register, 1928.

Centre.	Mothers.	Infants.	Children. 1—5.	Expectant Mothers.
Homestead	165	148	38	14
Market Street ..	239	205	56	33
Eastmoor	187	137	69	12
Belle Vue	147	115	53	8
Thornes Lane ..	181	132	59	9
Alverthorpe ..	69	65	14	3
Totals ..	988	802	289	79

Attendances.

Centre.	Mothers.	Infants.	Children. 1—5.	Expectant Mothers
Homestead	2170	1659	848	64
Market Street ..	1766	1187	646	48
Eastmoor	2004	1360	1067	52
Belle Vue	2511	1780	1309	80
Thornes Lane ..	1816	1252	826	43
Alverthorpe ..	862	782	258	28

The work of the Child Welfare Centres has continued at the same hours and in the same premises as in previous years.

698 new infants and 167 mothers were examined medically at the Centres during 1928. Of the 698 infants, 282 (40 per cent.) were found to be normal and satisfactory, while 416 had some defect or ailment, although in many cases the ailments were only slight. The principal ailments were gastro-intestinal (412), Bronchitis (231), Skin Complaints (178), and Dentition Disorders (103). The total number of medical examinations made was 4,445 (4,053 of children, and 392 of mothers). Since May, 1928, it has been possible for a doctor to be present throughout the whole session at each Centre instead of having to attend two Centres in one afternoon as used formerly to happen. In June, 1928, a new system of controlling the distribution of dried milk to Centre mothers and babies was commenced. Medical Certificates are now issued at the Centres to every case

where a supply of dried milk seems necessary. These certificates last for one month only, after which a new certificate is required. This method ensures at least one visit to the Centre and one medical examination per month, and prevents supplies being obtained over indefinite periods after the need has passed. The circumstances of the parents are enquired into at intervals as before, and the milk is supplied at cost price or less, according to the family's income. Even a monthly attendance at a Centre is far from ideal but the babies which are brought only once a month would never be seen at all were it not for the necessity of renewing the medical certificates. Only a small proportion of the attendances are actually of this nature.

The need for an Ultra-Violet Ray apparatus still persists. It is becoming more and more difficult to have Ultra-Violet Ray treatment for babies and young children on account of the large waiting list at the Clayton Hospital. The cases one would like to have treated in this way are, especially, cases of early rickets, and as the hospital apparatus is being used to the full extent for treatment of more urgent conditions, these cases have to stand aside at the very time when this form of treatment would be most beneficial.

The Voluntary Helpers of the Babies' Welcome Committee continue to give their most valuable and much appreciated co-operation in the work of the Centres.

INFANT FEEDING.—Infants born 1927.

	Infants born 1927.	Percentage.
Wholly breast fed for six months or longer	752	81·7
Wholly breast fed for periods less than six months, but more than one month	58	6·3
Combined breast fed and artificial feeding for periods of six months or longer	64	6·9
Combined breast and artificial feeding for periods of less than six months, but more than one month ..	24	2·5
Artificially fed from 1 month or earlier	26	2·6
Total ..	924	100·0

The above Table is based on the records of 924 infants born in Wakefield in 1927 and kept under observation for 12 months. The percentage of infants breast fed continues to improve.

SUPPLY OF DRIED MILK, 1928.

Sold at Cost Price	2,953 lbs.
Sold at Half Price	1,012 „
Sold at Quarter Price	1,288 „
Supplied Free.. ..	8,211 „
	<hr/>
	13,464 „
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The cost to the Corporation for dried milk given free or sold at less than cost price amounted to £670 19s. 5d.

35 packets of Lactogol were also given out during the year, 14 being sold at cost price, and 21 given free.

CONVALESCENT HOME FACILITIES FOR MOTHERS.

During 1928, the Rotary Club continued its beneficent social service and sent 46 mothers for convalescent treatment at Long Ashes, near Grassington. The mothers were selected as debilitated and much in need of a change of air which otherwise they were not likely to get. Each stayed a fortnight and all derived great benefit and pleasure from their stay in Wharfedale.

MENTAL DEFICIENCY.

At the end of 1928, there were 9 persons (6 males and 3 females) detained in Institutions under Orders made under the Mental Deficiency Act. In addition, a man, the subject of an order, remained at home on licence from an Institution. There were 36 mental defectives (19 males and 17 females) living at home, 8 under statutory and 28 under voluntary supervision.

The Occupation Centre conducted by the Social Service Council on behalf of the Corporation has continued under Miss Coates to do useful work. The average attendance was 5 males and 7 females. The Centre was visited during the year by Miss Redfern of the Board of Control who reported as follows, on the girls :—

“ Good work continues to be done with the girls, and
 “ it is evident that much thought and time is given to the
 “ preparation of attractive handwork; also that it is so
 “ graded that a good standard of finish can be maintained.
 “ Physical training is taken each session, and includes

“ games, exercise and dancing, though the small numbers
 “ at present limit possibilities.”

With regard to the boys, Miss Redfern stated :—

“ Intelligent consideration is being given to grade
 “ each branch of training to suit the mentality of the boys.
 “ Success is due to each boy being provided with tasks
 “ within his powers, with gradual advances as soon as he
 “ is ready. There is a happy busy tone and each boy is
 “ keen about his own efforts. I was pleased to see the
 “ thoroughness of the personal habit training. The arrange-
 “ ments for personal hygiene are well carried out as a
 “ definite part of the session and full use is made of
 “ opportunities for training in domestic work, such as
 “ polishing, washing towels, etc. Suitable sense training
 “ apparatus was being used and each boy was able to
 “ attempt some form of handwork, such as rag rug making,
 “ or wool winding for balls. Physical training was entered
 “ into with spirit; the time was partly used for grasp
 “ instruction and partly with individuals, carrying out
 “ balance movements, free movements, jumping, etc. I
 “ was interested to hear that three boys who used to attend
 “ the Centre are having trials as workers, two at the firewood
 “ trade and one at a greengrocery business.”

During 1928 an Order was made constituting the South West Yorkshire Board for the Mentally Defective, and the following County Boroughs are included in the Board, namely :— Dewsbury, Doncaster, Halifax, Huddersfield, Rotherham and Wakefield. The first meeting of the Board was held in October, when the question of providing a residential institution or colony for Mental Defectives in the six County Boroughs was taken up. No decision had been come to at the end of the year.

MENTAL HYGIENE.

In the past public medicine has mainly concerned itself with the prevention or the mitigation of diseases of the body, and has given but scant consideration to the prevention of diseases of the mind. It is probably true that mental disorders depend on physical causes and we also realise that much mental disease has been prevented through the effective treatment of physical disease, *e.g.*, the prevention of general paralysis of the insane by the early treatment of syphilis, the prevention of mental deficiency from cretinism by early and continued thyroid treatment, etc., but the prevention of mental disease has never been taken up as a definite public health policy.

The main reason for this comparative neglect is probably to be found in the general belief that little or nothing can be done to prevent mental disorders, apart from those dependent on well known physical antecedents, such as those just mentioned. Although one is bound to confess that our knowledge of the fundamental causes of much mental disease is yet meagre, and our schemes of prophylaxis necessarily limited and experimental, yet an attitude of complete pessimism is no longer tenable. At any rate the natural history of these maladies is now much better understood, and their beginnings more definitely recognised than they were formerly. The onset of insanity seems to occur with dramatic suddenness and often comes, as it were, as a bolt from the blue. But careful observation shows that the onset is not always as sudden as it seems, and will generally reveal a whole train of events leading up to the mental explosion. It is during these early stages of the developing disorder when preventive treatment has its opportunity, and may possibly prevent the disease advancing to the more obvious and less curable stage which we call insanity. If anything, however small, can be done to reduce the serious prevalence of mental disease it ought to be done. In 1928, there were 138,293 insane persons under care in England and Wales, and during the previous five years, the average annual rate of increase was 2,403. These figures, high as they are, do not by any means include all those affected by mental disorder. They do not include the very considerable number of people affected in varying degrees with mental disease, who have not yet come within the purview of the Lunacy Acts, and they do not include the large army of mental defectives, although admittedly the problem of mental deficiency differs in several respects from that of other mental disorders, and is really not under consideration here. Mental Hospitals throughout the whole country are being pressed for accommodation for the increasing number of cases certified, and whether there is a real increase of lunacy, as I am inclined to think, or not, the problem is a serious one and becoming more and more serious as time goes on. Now the extraordinary thing is that the great majority of victims of mental disorder cannot obtain institutional treatment or indeed, any kind of specialised treatment, until they have been certified insane. This means, in effect, that they cannot receive the advantages offered by the modern development of psychological medicine at the stage of their malady when they can best derive benefit from them. It therefore seems to me that in Wakefield there ought to be established a Psychiatric Clinic where patients referred by their own doctors could be examined by a medical man specially trained and

experienced in psychological medicine, and where, if possible, beds would be available for indoor observation and treatment. The most convenient place for such a Clinic would be the out-patient department of a general hospital. The work of such a Clinic could be usefully extended to the treatment of many forms of mental disorder, and nervous disease, other than those of potential insanity, *e.g.*, to the large group of people affected with some form of psycho-neurosis, and to those children known as "difficult," "nervous," "maladjusted," or "delinquent." There are indeed great and incalculable possibilities from such a Clinic, the establishment of which would mark a great step forward in public health administration.

PUBLIC HEALTH EDUCATION.

The monthly issue of the health journal "Better Health," which was commenced in 1927, was continued throughout 1928. With the commencement of the second volume in October, a new and specially designed cover was adopted, and the title "Wakefield Health Bulletin" was given to the local supplement. The journal is distributed chiefly through the various Clinics and Child Welfare Centres, and among the School Teachers, and it appears to play a useful role in health propaganda.

The usual Health Week, organised by the Social Service Council and financed by the Corporation and Insurance Committee was held in October, and was devoted to Dental Hygiene. As the School Dentist was just then commencing his duties, the time appeared particularly appropriate for a general propaganda on behalf of dental hygiene. The activities of the week comprised public lantern lectures by Sir Frank Colyer, K.B.E., F.R.C.S., L.D.S., and Mr. C. Holland Child, L.D.S., talks to school children and to mothers at the Child Welfare Centres by Mr. Moxon, L.D.S. (School Dentist), and the School Medical Officers; Cinema Exhibition to School Children (4 days); and a Dental Exhibition, kindly supplied by the Dental Board of the United Kingdom. The Dental Board also supplied a great quantity of literature and cartoons, which were mainly used in the schools. The School Teachers supplemented the talks of the medical and dental officers, and the children in the senior departments afterwards wrote essays on the subject of the talks, for which prizes were presented. There is every reason to believe that much good was done during Health Week, and as usual, probably most good was done by the work amongst the school children. The educational work in social hygiene is referred to elsewhere.